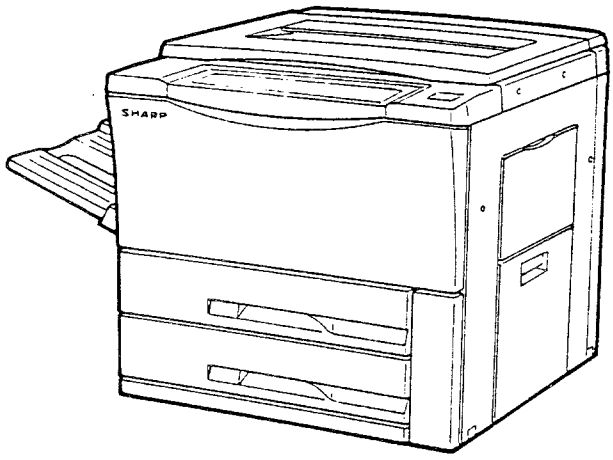
SF-2022
SF-2027

SHARP SERVICE MANUAL

CODE: 00ZSF2022TM/E



No.2

SF-2022
SF-2027
SF-D20
SF-21
MODEL SF-DM11

CONTENTS

[1] PRODUCT OUTLINE 1-1

[2] PRODUCT SPECIFICATIONS 2-1

[3] OPTIONS SPECIFICATIONS 3-1

[4] COMPONENT IDENTIFICATION 4-1

[5] PROCESS 5-1

[6] DEVELOPING UNIT 6-1

[7] PAPER FEED UNIT 7-1

[8] TRANSPORT/FUSING SECTION 8-1

[9] HIGH VOLTAGE SECTION 8-1

[10] OPTICAL SECTION 10-1

[11] ELECTRICAL SECTION 11-1

Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

CONTENTS

[1] PRODUCT OUTLINE 1-1

1. The SF-2022 and SF-2027 are medium class copiers that produce 20 to 30 copies per minute. The SF-2022 and SF-2027 have all the standard features of medium class copiers as well as having system expansion capability similar to high end copiers. 1-1
2. Target users 1-1
3. Features 1-1
   (1) Compact body 1-1
   (2) Clean copy production without contaminating environments 1-1
   (3) High copy performance 1-1
   (4) Adoption of modular structure 1-1
   (5) Service, maintenance, and installation enhancement 1-1
4. System outline (options) 1-1

[2] PRODUCT SPECIFICATIONS 2-1

1. Basic specification 2-1
   (1) Type 2-1
   (2) Copy method 2-1
   (3) Kinds of originals 2-1
   (4) Copy speed 2-1
   (6) Warmup time 2-1
   (7) Multicopy 2-1
   (8) Magnification ratio 2-2
   (9) Exposure 2-2
   (10) Paper feed 2-2
   (11) Developing method 2-3
   (12) Charge method 2-3
   (13) Transfer method 2-3
   (14) Separation method 2-3
   (15) Fusing method 2-3
   (16) Cleaning method 2-3
   (17) Light source 2-3
   (18) Blanking areas 2-3
   (19) Automatic duplex 2-4
   (20) Paper eject and finishing 2-4
   (21) Additional features 2-4
   (21) Power supply 2-4
   (22) Power consumption 2-4
   (23) Appearance 2-4
   (24) Accessories 2-4
2. Consumables 2-5
   SF-2022/2027 consumables and option units list (SEC) 2-5
   SF-2022/2027 Supply Options (SECL) 2-6
   SF-2022/2027 Supply Options (SEEG, SUK) 2-7
   SF-2022.2027 Supply Options (SCA, SCNZ, Middle East, Africa) 2-8
   SF-2022/2027 Supply Options (Asia, Middle/South America) 2-9
3. Environmental requirements 2-10

[3] OPTIONS SPECIFICATIONS 3-1

1. SF-A14 3-1
2. SF-A54 3-1
3. SF-S14 3-1
4. SF-S15 3-1
5. SF-S52 3-2

6. SF-D20 3-2
7. SF-D21 3-2

[4] COMPONENT IDENTIFICATION 4-1
1. External view 4-1
2. Operation panel 4-3
3. Internal view 4-5
4. Clutches, solenoids 4-6
5. SF-2022/2027 sensors 4-7
6. Motors 4-8
7. Board list 4-9
8. Duplex copy tray 4-10
9. Desk unit (SF-D20) 4-11
10. Desk unit (SF-D21) 4-12

[5] PROCESS (Photocondor drum and cleaning unit) 5-1
1. Basic theory 5-1
(1) Image forming process 5-1
(2) Photoconductor 5-1
(3) Types of photoconductors 5-1
(4) Characteristics of photoconductor 5-2
2. SF-2022/2027 basic process and structure 5-3
(1) Details of image forming process 5-3
(2) Relationship between the OPC drum and light 5-4
(3) Transition of photoconductor surface potential 5-5
(4) Photoconductor drum sensitivity correction 5-5
3. Basic structure 5-5

[6] DEVELOPING UNIT 6-1
1. Basic theory 6-1
(1) Two-component developer 6-1
(2) Two-component magnetic brush development 6-1
(3) Developing bias voltage 6-1
2. Structure 6-1
3. Operation 6-1

[7] PAPER FEED UNIT 7-1
1. Outline 7-1
2. Basic configuration 7-1
3. Basic operation 7-2
(1) Manual paper feed operation 7-2
(2) Cassette paper feed operation 7-3

[8] TRANSPORT/FUSING SECTION 8-1
1. General 8-1
2. Basic composition and functions 8-1
(1) Transport section 8-1
(2) Fusing section 8-1

[9] HIGH VOLTAGE SECTION 8-1
1. General 8-1
2. Basic composition 8-1
(1) Main (charging) corona – High voltage transformer (MHVG) 8-1
(2) Transfer corona – High voltage transformer (THVG) 8-1
(3) Separation corona – High voltage transformer (SHVG) 8-1

[10] OPTICAL SECTION 10-1
1. General 10-1
2. Basic composition 10-1
(1) Original table 10-1
(2) Copy lamp 10-1
(3) Mirror 10-1
(4) Lens (Fixed focus lens) 10-1
(5) Lens home position sensor (LHPS) 10-1
(6) No. 4. No. 5 mirror base home position sensor (MBHPS) 10-2
(7) Lens base 10-2
(8) Lens slide shaft 10-2
(9) Lens drive wire 10-2
(10) Mirror base C 10-2
(11) Mirror base C (No. 4, No. 5 mirrors) drive wire 10-2
(12) Mirror motor 10-2
(13) Mirror home position sensor (MHPS) 10-2
(14) Mirror base B 10-2
(15) Copy lamp unit 10-2
(16) Thermal fuse 10-2
(17) Reflector 10-2
(18) Exposure adjusting plate 10-2
(19) Mirror base drive wire 10-2
(20) Mirror base (No. 4, No. 5) drive motor 10-2
(21) Lens drive motor 10-2
(22) AE sensor 10-2
(23) Blank lamp operation 10-2
(24) Original size detection 10-2
3. Basic operation 10-3
4. Optical system dirt correction 10-4
(1) Setting the reference value for optical system correction. 10-4
(2) Dirt correction 10-4

[11] ELECTRICAL SECTION 11-1
1. System Block Diagram 11-1
2. Main circuit 11-2
(1) Block diagram 11-2
(2) CPU (IC113) H8/570 11-3
(3) I/O (IC114) TE7750 11-7
(4) RAM (IC115) X28C64 11-11
(5) Decoder (IC139, IC138) 11-13
(6) Start/stop control circuit 11-14
(7) Heater lamp control circuit 11-16
(8) Driver circuit (Solenoid, magnetic clutch) 11-17
(9) Stepping motor drive circuit 11-17
(10) AE (Auto Exposure) sensor circuit 11-18
(11) Toner supply motor drive circuit 11-18
3. Operation circuit 11-19
4. Desk circuit 11-22
(1) Block diagram 11-22
(2) Circuit block diagram 11-24
(3) Cassette size detecting section 11-26
(4) 24V monitor and door open detecting section 11-27
(5) Output section 11-27
(6) Overcurrent detecting section 11-28

[1] PRODUCT OUTLINE

1. The SF-2022 and SF-2027 are medium class copiers that produce 20 to 30 copies per minute. The SF-2022 and SF-2027 have all the standard features of medium class copiers as well as having system expansion capability similar to high end copiers.

2. Target users

Average copy volume: 3,000 to 8,000 copies/month
Usage: 1,000 to 10,000 copies/month

3. Features

(1) Compact body

① Small body size
The width of the body is 600mm that is the smallest in this class.

② Use of a front loading paper cassette and the folding multiple manual paper feed table eliminate the protrusion on the right side of the machine.

③ Use of a space reduced RADF and the front loading drawers save space even after upgrades.

(2) Clean copy production without contaminating environments

① Consideration was given during design in order to avoid contamination against ozone and dust. Considerations were also made for recycle paper, packaging, and recycling of machine elements after the use.

② Low level of machine noise.

(3) High copy performance

① The fastest first copy time in this class.

② High job efficiency.

(4) Adoption of modular structure

① Offers a variety of paper feed systems by the use of a modular desk

2 module slots
Up to two units of 500-sheet cassette modules can be installed at the same time.

LCC desk unit
Besides, a 1000-sheet LCC, a 500-sheet cassette module can be added in the LCC desk.

② Upper cassette module that allows the machine specification to be chosen according to the usage.

Cassette modules.
500-sheet cassette module.
Automatic Duplex Unit (ADU) in the modular design.

(5) Service, maintenance, and installation enhancement

① Upgraded paper feed performance

② Adoption of the paper feed roller

③ Easy installation and reduced maintenance time

④ Internal power supply for option units

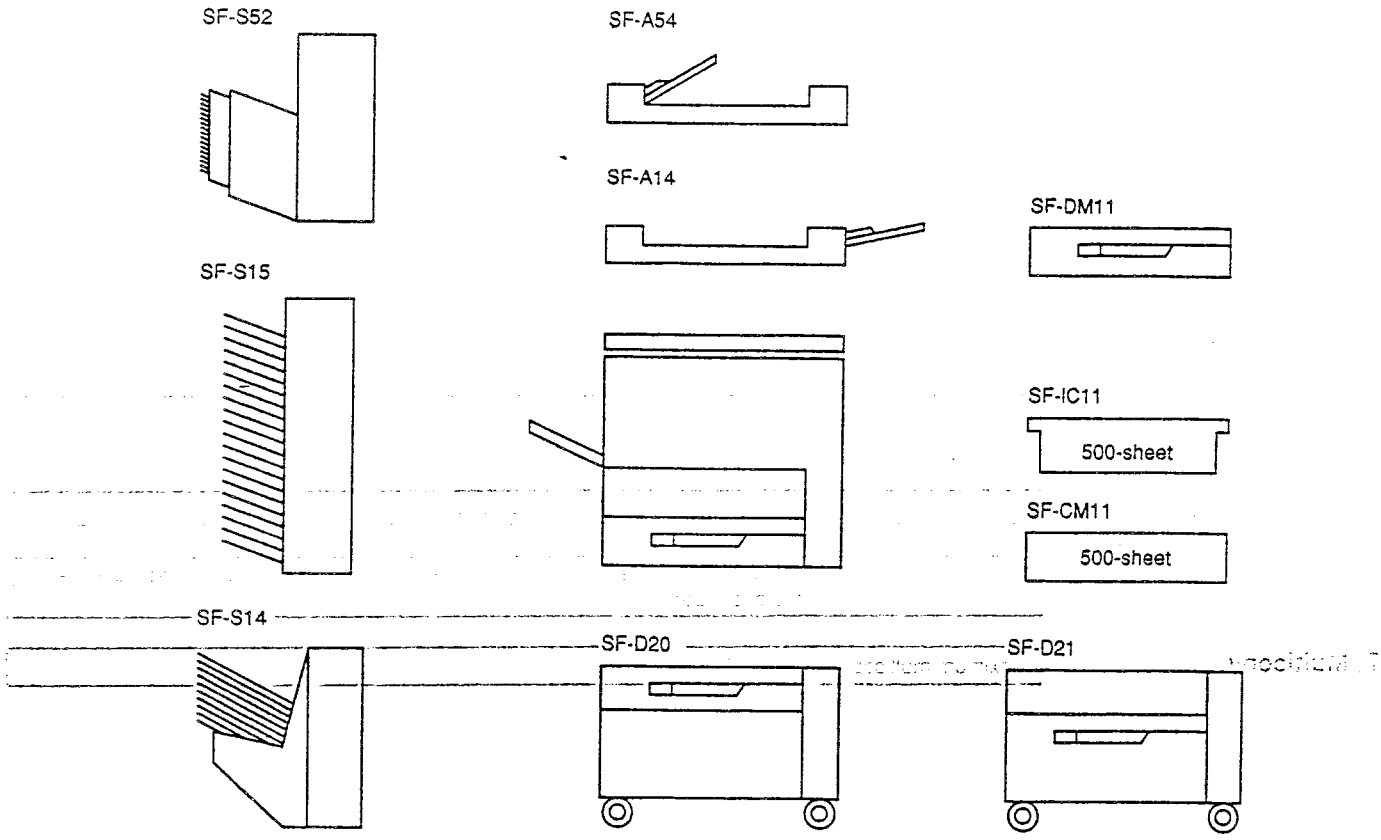
⑤ Easier replacement of consumable

⑥ Adoption of the paper feed drawer system

⑦ Provision of the communication feature

⑧ Universal power supply for 50/60Hz source frequency

4. System outline (options)



[2] PRODUCT SPECIFICATIONS

1. Basic specification

(1) Type

Desktop

(2) Copy method

Dry static copier

(3) Kinds of originals

Sheet, book, three dimensional object		
Thickness of original:		Maximum 30mm in level with the original cover in use.
Weight of original:		Maximum 1.8 kg
Maximum original size:		A3, 11" x 17"
Original alignment:		Center and left
Use of an original sensor:		
SF-2027	AB series;	A3, B4, A4, A4R, A5
	Inch series:	11" x 17", 8½" x 14", 8½" x 11", 8½" x 11" (R), 8½" x 5½"

Option:	RADF, ADF
Original loading capacity:	50 sheets
Original size:	A3 to A5, 11" x 17" to 8½" x 5½"
Original replace speed:	22 sheets per minute (27 sheets per minute for SF-2027)
Weight of original:	50 to 128 g/m^2
Random or mixed paper feed mode:	Possible

(4) Copy speed

	Actual (1:1)	Enlage (ratio)	Reduce (ratio)
A3	12/15 sheets per minute	9/10 sheets per minute (200%)	10/12 sheets per minute (50%)
B4	14/17 sheets per minute	9/10 sheets per minute (200%)	11/14 sheets per minute (50%)
A4 (portrait)	22/27 sheets per minute	11/13 sheets per minute (200%)	18/21 sheets per minute (50%)
A4 (landscape)	17/21 sheets per minute	10/11 sheets per minute (200%)	14/17 sheets per minute (50%)
B5 (portrait)	22/27 sheets per minute	11/13 sheets per minute (200%)	18/21 sheets per minute (50%)
B5 (landscape)	17/21 sheets per minute	10/11 sheets per minute (200%)	14/17 sheets per minute (50%)
Double letter	12/15 sheets per minute	9/10 sheets per minute (200%)	10/12 sheets per minute (50%)
Legal	14/17 sheets per minute	9/10 sheets per minute (200%)	11/14 sheets per minute (50%)
Letter (portrait)	22/27 sheets per minute	11/13 sheets per minute (200%)	18/21 sheets per minute (50%)
Letter (landscape)	17/21 sheets per minute	10/11 sheets per minute (200%)	14/17 sheets per minute (50%)

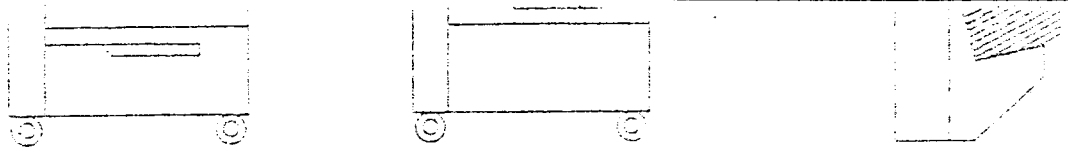
NOTE: Copy speeds indicated in Enlargement and Reduction modes are the slowest speeds in the respective mode.

(6) Warmup time

About 90 seconds
(Without pre-heat feature)
Misfeed recovery time: 8 seconds, provided that it is in the standard condition in 60 seconds after leaving the door open.

(7) Multicopy

Maximum multicopy number: 99 sheets



(8) Magnification ratio

Fixed ratio	AB series: 4R+4E; 200, 141, 122, 115, 100, 86, 81, 70, 50%
	Inch series: 4R+4E; 200, 141, 129, 121, 100, 95, 77, 64, 50%
Zooming range:	50 to 200% (1% increments)

(9) Exposure

Exposure mode: Auto, manual, photo
Exposure system: Slit exposure and moving optical system (fixed original table)

(10) Paper feed

Copy size (maximum ~ minimum)	AB series: A3 to A6R
	Inch series: 11" x 17" to 8½" x 5½"
Method	One cassette + multi-manual feed
Capacity	500 + 50 sheets

AB series

Paper entry	Paper size	Paper weight	Size selection	Side, front
Upper cassette	B5/B5R A4/A4R/B4/A3	56 ~ 80g/m² 15 ~ 21 lbs.	Selection by way of guide replacement or by the service engineer	Front, drawer in the same body ADU compatibility available
Lower cassette	A5/B5/B5R A4/A4R/B4 A3: * With the option inner cassette used	56 ~ 80g/m² 15 ~ 21 lbs.	Selection by way of guide replacement or by the service engineer	By way of front, inner cassette

Inch series

Paper entry	Paper feed size	Paper weight	Size selection	Side, front
Upper cassette	8½ x 11", 8½" x 11" (R), 8½" x 14", 11" x 17"	56 ~ 80g/m² 15 ~ 21 lbs.	Selection by way of guide replacement or by the service engineer	Front, drawer in the same body ADU compatibility available
Lower cassette	8½ x 11", 8½" x 11" (R), 8½" x 14", 11" x 17", 8½" x 5½" * With the option inner cassette used	56 ~ 80g/m² 15 ~ 21 lbs.	Selection by way of guide replacement or by the service engineer	By way of front, inner cassette

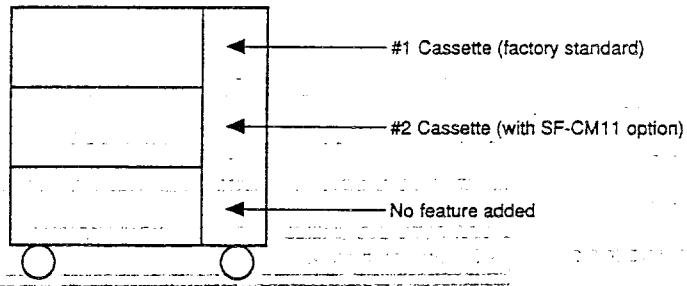
Manual feed

Paper size:	AB series: Inch series:	A3 to A6R 11" x 17" to 8½" x 5½"
Paper weight:	Multifeed mode: Single feed mode:	56 to 80 g/m² (15 to 21 lbs) 52 to 128 g/m² (14 to 34 lbs) (A4 size or under, if above 105 g/m²) (or 28 lbs)
Kind of paper:		Standard, Sharp designated paper, OHP

1. Single paper feed desk

<<Model name: SF-D20>>

(Outlook)



Number of paper feed sources: Single (two sources if expanded)

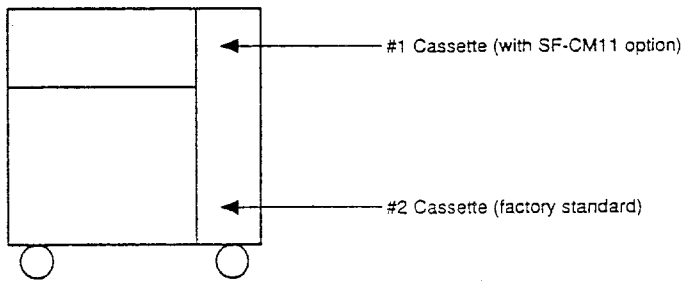
Paper feed capacity:	500 sheets
Expanded:	1000 sheets (500-sheet cassette x 2 sources (with SF-CM11 in use)).
	* 500 sheets of 80 g/m² must be in each cassette.

Paper size:	AB series: A3, B4, A4, A4R, B5, B5R Inch series: 11" x 17", 8½" x 14", 8½ x 11", 8½ x 11" (R)
Paper weight:	50 to 80 g/m² (15 to 21 pounds)
Size selection:	Selection by way of guide replacement or by the service engineer
Power supply:	From the copier
Physical dimentions (mm):	600(W) x 625(D) x 451(H)
Weight:	27.2Kg (59.8 lbs).

8. Large capacity paper feed desk

<<Model name: SF-D21>>

(Outlook)



Number of paper feed sources:	Single (two sources if expanded)
Paper feed capacity:	1000 sheets
Expanded:	1500 sheets 1000-sheet cassette + 500-sheet cassette sources (with SF-CM11 in use). * Given number of sheets of 80 g/m² must be in each cassette.

<<1000-sheet drawer (#2 cassette)>>

Paper size:	AB series: B4, A4, A4R, B5, B5R Inch series: 8½" x 14", 8½ x 11", 8½ x 11" (R)

<<#1 cassette option>>

Paper size:	AB series: A3, B4, A4, A4R, B5, B5R Inch series: 11" x 17", 8½" x 14", 8½ x 11", 8½ x 11" (R)
Paper weight:	50 to 80 g/m² (15 to 21 punds)
Size selection:	Selection by the service engineer
Power supply:	From the copier
Physical dimentions (mm):	600(W) x 625(D) x 451(H)
Weight:	33.2Kg. (73.0 lbs)

(11) Developing method	Dry, two components magnetic brush method
(12) Charge method	(–) DC saw-teeth electrode method
(13) Transfer method	(–) DC Corotron method
(14) Separation method	AC Corotron method
(15) Fusing method	Heat roller method
(16) Cleaning method	Blade method
(17) Light source	Halogen lamp
(18) Blanking areas	Void area: 3mm from the lead edge Image loss: 3mm at maximum during the actual (1:1) copy mode

(19) Automatic duplex

Option (module)		
Location	Copier upper module slot	
Size	AB series:	A3, B4, A4, A4R, B5, B5R, A5
	Inch series:	11" X 17", 8½" x 14", 8½ x 11", 8½ x 11" (R)
Capacity	50 sheets (below A4 or letter sizes) or 30 sheets (above B4 or 8½" x 14" size)	
Paper weight	56 to 80 g/m² (15 to 21 lbs)	

(20) Paper eject and finishing

Capacity of paper receive tray	250 sheets		
Finishing (with option in use)			
Finisher function	Sorted bin capacity	Non-sorted bin capacity	
20-bin sorter	50 sheets	100 sheets	Fixed bins
10-bin sorter	50 sheets (A4 size or Less)	100 sheets	Movable bins
20-bin stapler sorter	35 sheets (25 sheets, if stapler used) (A4 or Less)	100 sheets	Movable bins

(21) Additional features

	Availability of feature	
APS	No/Yes	Yes if the ADF used
AMS	Yes	
Margin shift	Yes	10mm shift (S → S)
DPCM	Yes	Enlarge not permitted
Edge erase	Yes	7 to 12mm wide
Monochrome	Yes	(Red, blue)

APS: Auto paper selection
AMS: Auto magnification ratio selection
DPCM: Dual page copy mode

Supplement

Binding margin

Width	AB series	Inch series
Single sides to single sided	10mm	1/4"
Double sided to single sided	5mm	1/4"
Single sided to double sided (front)	0	0
(reverse)	5mm	1/4"
Double sided to double sided (front)	10mm	1/4"
(revrse)	10mm	1/4"

DPCM
Enlarge not possible

Frame delete

AB series		Inch series	
Size	Deleted width (mm)	Size	Deleted width (mm)
A3	11.5±3	11" x 17"	11.5±3
B4	9.5±3	8½" x 14"	7 ±3
A4	11.5±3	8½" x 11"	11.5±3
A4R	10 ±3	8½" x 11" (R)	7 ±3
B5	9.5±3	8½" x 5½"	7 ±3
B5R	8 ±3		

(21) Power supply

Voltage: 100V, 50/60Hz; 110V, 50/60Hz; 120V, 60Hz; 127V, 60Hz; 220V, 50/60Hz; 240V, 50Hz
Frequency: 50/60Hz, universal

(22) Power consumption

Maximum power consumption: 1.35KW, maximum, with options used
Standby power consumption: 0.05KW with the heater lamp inactive; 0.85KW with the heater lamp active.

(23) Appearance

WxDxH (mm) 600 x 650 x 567 (at the top of the table glass)
600x 650 x 607 (at the top of the original cover)
Occupied area (W x D in mm) 1172 x 650 (with the paper receive tray and manual feed bypass open
Weight: Main body About 66Kg (145lbs)
Paper feed module: 4.8Kg (10.6 lbs)
Original cover: 1.5Kg (3.3 lbs)

(24) Accessories

Original cover, paper receive tray, waste toner collect containers (x 4) with one container installed at the factory, instruction manual, dust cover, quick magnification ratio reference chart, key sheet
Other printed material
Installation report (SEEG), SCA warranty card, warranty registration card (SUK)
Different accessories and standard equipment may vary depending on the product destination.

2. Consumables

SF-2022/2027 consumables and option units list (SEC)

No.	Name	Contents of items	Life	Product name	Contents per pack	Size (W × D × H)(mm), weight (Kg)	Note
1	Drum	OPC drum ×1	80K	SF-222DR	1	442 × 188 × 421/4.9	
2	Developer, black	Developer (850g) × 10	80K (×10)	SF-222MD1	10	281 × 200 × 230/9.5	(SF-222ND1) × 10 = SF-222MD1
3	Toner, black	Toner cartridge (320g) × 10	8K (×10)	SF-222MT1	10	712 × 390 × 163/6.2	(SF-222NT1) × 10 = SF-222MT1
4	Color developer (red) (blue)	Developer (850g) × 10	10K (×10)	 SF-222MD2 SF-222MD3	10	438 × 183 × 180/9.6	(SF-222ND2) × 10 = SF-222MD2 (SF-222ND3) × 10 = SF-222MD3
5	Color toner (red) (blue)	Toner cartridge (250g) × 10	6K (×10)	 SF-222MT2 SF-222MT3	10	712 × 390 × 163/5.5	 (SF-222NT2) × 10 = SF-222MT2 (SF-222NT3) × 10 = SF-222MT3
6	Color developer kit (red) (blue)	Developer (850g) × 1 Toner cartrige (250g) × 1 Developing unit ×1 Storage case ×1		SF-222NK2 SF-222NK3	1	780 × 259 × 210/4.55	
7	Upper heat roller kit	Upper heat roller ×1 Fuser separation pawl, lower ×4	160K	SF-222UH	5	439 × 347 × 119/3.26	Service parts item must be used when replacing the fuser separation pawl (80K) at every 80,000 copies
8	Lower heat roller kit	Lower heat roller ×1 Fuser separation pawl, lower ×2	160K	SF-880LH	5	357 × 341 × 124/5.0	Service parts item must be used when replacing the fuser separation pawl (80K) at every 80,000 copies (Use shared with those of SF-8570 and SF-8870).
9	80K maintenance kit	Cleaner blade ×1 Upper cleaning roller ×1 Main corona charging plate unit ×1 Drum separation pawl unit ×1	80K	SF-222KA1	5	482 × 408 × 122/3.0	
10	Cleaner blade	Cleaner blade ×10	80K (×10)	SF-222CB	10	416 × 197 × 208/2.7	
11	Upper cleaning roller	Upper cleaning roller ×10	80K (×10)	SF-222CR	10	400 × 166 × 85/2.1	
12	Stapler cartridge	Staple cartridge (3pcs) ×10		SF-LS51	10	250 × 96 × 154/6.2	Use of the stapler shared with the SF-S51 stapler/sorter (SF-SC50) × 10 = SF-LS51

* Use the service parts for the waste toner container (4 bottles/80K), screen grid (80K), ozone filter (80K), toner receive seal (160K), and DV seal (160K). The main corona charging plate unit (80K) and the drum separation pawl unit (80K) are also available as service parts.

SF-2022/2027 Supply Options (SECL)

No.	Name	Content		Life	Model name	Packing	Dimensions (W × D × H)/Weight mm/kg	Remark
1	Drum	OPC drum	×1	80K	SF-222DR	1	442 × 188 × 421/4.9	
2	Developer (Black)	Developer	(850g) ×10	80K (×10)	SF-222MD1	10	281 × 200 × 230/9.5	(SF-222ND1) × 10 = SF-222MD1
3	Toner (Black)	Toner cartridge	(320g) ×10	8K (×10)	SF-222MT1	10	712 × 390 × 163/6.2	(SF-222NT1) × 10 = SF-222MT1
4	Color developer	Developer	(850g) ×10	10K (×10)		10	438 × 183 × 180/9.6	
	(Red)				SF-222MD2			(SF-222ND2) × 10 = SF-222MD2
	(Blue)				SF-222MD3			(SF-222ND3) × 10 = SF-222MD3
5	Color toner	Toner cartridge	(250g) ×10	6K (×10)		10	712 × 390 × 163/5.5	
	(Red)				SF-222MT2			(SF-222NT2) × 10 = SF-222MT2
	(Blue)				SF-222MT3			(SF-222NT3) × 10 = SF-222MT3
6	Color developer kit	Developer	(850g) ×1			1	780 × 259 × 210/4.55	
	(Red)	Toner cartridge	(250g) ×1		SF-222NK2			
	(Blue)	Developing unit	×1		SF-222NK3			
		Storage case	×1					
7	80K maintenance kit	Upper cleaning roller	×1	80K	SF-222KA	1	478 × 243 × 112/1.5	
		Cleaner blade	×1					
		Toner collection container	×4					
		Fuser separation pawl (Upper)	×4					
		Fuser separation pawl (Lower)	×2					
		Screen grid	×1					
		Charging plate unit	×1					
		Drum separation pawl unit	×1					
8	160K maintenance kit	Upper heat roller	×1	160K	SF-222KB	1	450 × 190 × 95/1.61	
		Lower heat roller	×1					
		Toner reception seal	×1					
		DV seal	×1					
		Heat roller gear	×1					
9	Staple cartridge	Staple cartridge (3 pcs)	×1		SF-SC51	10	250 × 96 × 154/6.2	Staple sorter (Common to the SF-S51)

SF-2022/2027 Supply Options (SEEG, SUK)

No.	Name	Content		Life	Model name	Packing	Dimensions (W × D × H)/Weight mm/kg	Remark
1	Drum	OPC drum	×1	80K	SF-222DM	1	442 × 188 × 421/4.9	
2	Developer (Black)	Developer	(850g) ×10	80K (×10)	SF-222LD1	10	281 × 200 × 230/9.5	(SF-222DV1) × 10 = SF-222LD1
3	Toner (Black)	Toner cartridge	(320g) ×10	8K (×10)	SF-222LT1	10	712 × 390 × 163/6.2	(SF-222T1) × 10 = SF-222LT1
4	Color developer (Red) (Blue)	Developer	(850g) ×1	10K	 SF-222DV2 SF-222DV3	10	438 × 183 × 180/9.5	Ordering unit: 10 pcs
5	Color toner (Red) (Blue)	Toner cartridge	(250g) ×1	6K	 SF-222T2 SF-222T3	10	712 × 390 × 163/5.5	Ordering unit: 10 pcs
6	Color developer kit (Red) (Blue)	Developer Toner cartridge Developing unit Storage case	(850g) ×1 (250g) ×1 ×1 ×1		 SF-222K2 SF-222K3	1	780 × 259 × 210/4.55	
7	80K maintenance kit	Upper cleaning roller Cleaner blade Toner collection container Fuser separation pawl (Upper) Fuser separation pawl (Lower) Screen grid Charging plate unit Drum separation pawl unit	×1 ×1 ×4 ×4 ×2 ×1 ×1 ×1	80K	SF-222KA	1	478 × 243 × 112/1.5	Make distinction with A3SF222KAL due to compliance with European code.
8	160K maintenance kit	Upper heat roller Lower heat roller Toner reception seal DV seal Heat roller gear	×1 ×1 ×1 ×1 ×1	160K	SF-222KB	1	450 × 190 × 95/1.61	Make distinction with A3SF222KBL due to compliance with European code.
9	Staple cartridge	Staple cartridge (3 pcs)	×1		SF-SC51	10	250 × 96 × 154/6.2	Staple sorter (Common to the SF-S51)

SF-2022.2027 Supply Options (SCA, SCNZ, Middle East, Africa)

No.	Name	Content		Life	Model name	Packing	Dimensions (W × D × H)/Weight mm/kg	Remark
1	Drum	OPC drum	×1	80K	SF-222DM	1	442 × 188 × 421/4.9	
2	Developer (Black)	Developer	(850g) ×10	80K (×10)	SF-222LD1	10	281 × 200 × 230/9.5	(SF-222DV1) × 10 = SF-222LD1
3	Toner (Black)	Toner cartridge	(320g) ×10	8K (×10)	SF-222LT1	10	712 × 390 × 163/6.2	(SF-222T1) × 10 = SF-222LT1
4	Color developer (Red) (Blue)	Developer	(850g) ×10	10K (×10)	 SF-222LD2 SF-222LD3	10	438 × 183 × 180/9.6	 (SF-222DV2) × 10 = SF-222LD2 (SF-222DV3) × 10 = SF-222LD3
5	Color toner (Red) (Blue)	Toner cartridge	(250g) ×10	6K (×10)	 SF-222LT2 SF-222LT3	10	712 × 390 × 163/5.5	 (SF-222T2) ×10 = SF-222LT2 (SF-222T3) × 10 = SF-222LT3
6	Color developer kit (Red) (Blue)	Developer Toner cartridge Developing unit Storage case	(850g) ×1 (250g) ×1 ×1 ×1		 SF-222K2 SF-222K3	1	780 × 259 × 210/4.55	
7	80K maintenance kit	Upper cleaning roller Cleaner blade Toner collection container Fuser separation pawl (Upper) Fuser separation pawl (Lower) Screen grid Charging plate unit Drum separation pawl unit	×1 ×1 ×4 ×4 ×2 ×1 ×1 ×1	80K	SF-222KA	1	478 × 243 × 112/1.5	Make distinction with A3SF222KAL due to compliance with European code.
8	160K maintenance kit	Upper heat roller Lower heat roller Toner reception seal DV seal Heat roller gear	×1 ×1 ×1 ×1 ×1	160K	SF-222KB	1	450 × 190 × 95/1.61	Make distinction with A3SF222KBL due to compliance with European code.
9	Staple cartridge	Staple cartridge (3 pcs)	×1		SF-SC51	10	250 × 96 × 154/6.2	Staple sorter (Common to the SF-S51)

SF-2022/2027 Supply Options (Asia, Middle/South America)

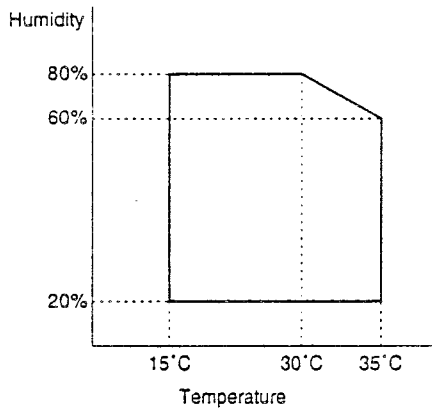
No.	Name	Content		Life	Model name	Packing	Dimensions (W × D × H)/Weight mm/kg	Remark
1	Drum	OPC drum	×1	80K	SF-222DR	1	442 × 188 × 421/4.9	
2	Developer (Black)	Developer	(850g) ×10	80K (×10)	SF-222CD1	10	281 × 200 × 230/9.5	(SF-222SD1) × 10 = SF-222CD1
3	Toner (Black)	Toner cartridge	(320g) ×10	8K (×10)	SF-222CT1	10	712 × 390 × 163/6.2	(SF-222ST1) × 10 = SF-222CT1
4	Color developer	Developer	(850g) ×10	10K (×10)		10	438 × 183 × 180/9.6	
	(Red)				SF-222CD2			(SF-222SD2) × 10 = SF-222CD2
	(Blue)				SF-222CD3			(SF-222SD3) × 10 = SF-222CD3
5	Color toner	Toner cartridge	(250g) ×10	6K (×10)		10	712 × 390 × 163/5.5	
	(Red)				SF-222CT2			(SF-222ST2) × 10 = SF-222CT2
	(Blue)				SF-222CT3			(SF-222ST3) × 10 = SF-222CT3
6	Color developer kit	Developer	(850g) ×1			1	780 × 259 × 210/4.55	
	(Red)	Toner cartridge	(250g) ×1		SF-222SK2			
	(Blue)	Developing unit	×1		SF-222SK3			
		Storage case	×1					
7	80K maintenance kit	Upper cleaning roller	×1	80K	SF-222KA	1	478 × 243 × 112/1.5	
		Cleaner blade	×1					
		Toner collection container	×4					
		Fuser separation pawl (Upper)	×4					
		Fuser separation pawl (Lower)	×2					
		Screen grid	×1					
		Charging plate unit	×1					
		Drum separation pawl unit	×1					
8	160K maintenance kit	Upper heat roller	×1	160K	SF-222KB	1	450 × 190 × 95/1.61	
		Lower heat roller	×1					
		Toner reception seal	×1					
		DV seal	×1					
		Heat roller gear	×1					
9	Staple cartridge	Staple cartridge (3 pcs)	×1		SF-SC51	10	250 × 96 × 154/6.2	Staple sorter (Common to the SF-S51)

3. Environmental requirements

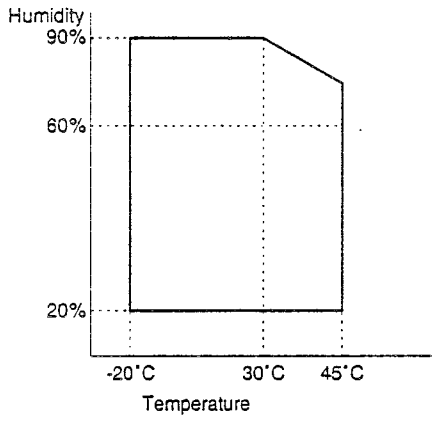
Conditions required for proper operation of the machine, as well as assurance of copy quality, the following are requested.

① Standard conditions
Recommended temperature range at 20 to 25 Centigrade (68 to 77 degrees F) and humidity range at 65 ± 5%RH.

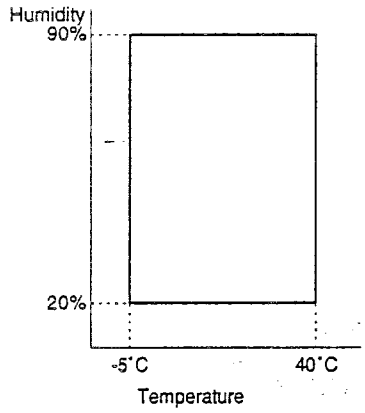
② Operating conditions

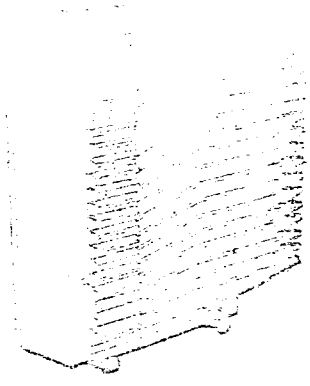


③ Shipping conditions



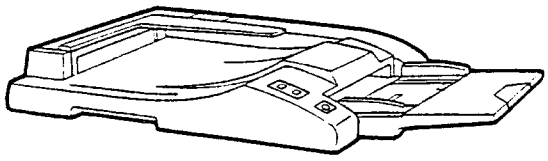
④ Consumables storage conditions





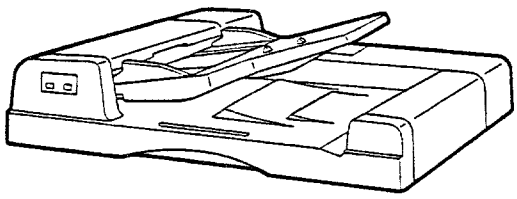
[3] OPTIONS SPECIFICATIONS

1. SF-A14



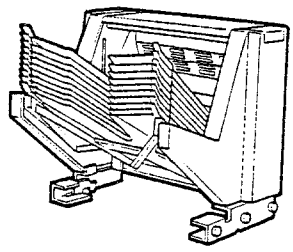
Acceptable originals	Weight:	14 to 34 lbs. 35 to 128 g/m^2.
	Size:	8½″ × 5½″ to 11″ × 17″. A5 to A3
	Number of sheets:	Up to 50 sheets 8½″ × 5½″, 8½″ × 11″, 8½″ × 14″, 11″ × 17″ A5, A4, B4, A3 Provided the total aggregate thickness does not exceed ¼″ (14 to 20 lbs.) or 3/16″ (21 lbs. to 34 lbs.) 6.5 mm (35 to 80 g/m^2) or 5 mm (81 to 128 g/m^2)
Power supply:	Drawn from the copier	

2. SF-A54



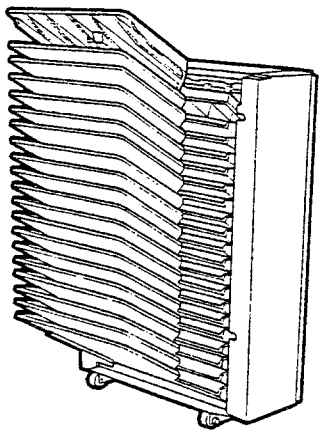
Acceptable originals	Weight:	(Single-sided original) 14 to 34 lbs. 35 to 128 g/m^2. (Two-sided original) 14 to 34 lbs. for 8½″ × 5½″ and 8½″ × 11″ 14 to 29 lbs. for 8½″ × 14″ and 11″ × 17″ 55 to 128 g/m^2.
	Size:	8½″ × 5½″ to 11″ × 17″. A5 to A3.
	Number of sheets:	Up to 50 sheets 8½″ × 5½″, 8½″ × 11″, 8½″ × 14″ A5, A4, B4 Provided the total aggregate thickness does not exceed ¼″ (14 to 20 lbs.) or 3/16″ (21 to 34 lbs.) 6.5 mm (35 to 80 g/m^2) or 5 mm (81 to 128 g/m^2) Up to 30 sheets 11″ × 17″, A3
Power supply:	Drawn from the copier	

3. SF-S14



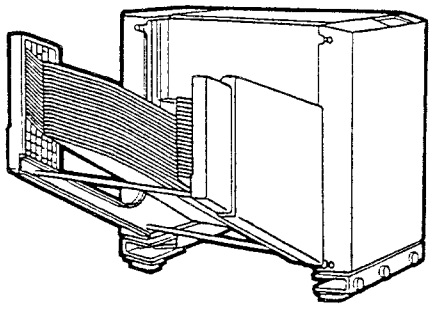
No. of bins	10	
Bin capacity	NON-SORT:	100 sheets (top bin)
	SORT:	50 sheets (8½″ × 11″) (A4) 40 sheets (8½″ × 14″) (B4) 30 sheets (11″ × 17″) (A3)
	GROUP:	35 sheets (8½″ × 11″) (A4) 25 sheets (8½″ × 14″) (B4) 20 sheets (11″ × 17″) (A3)
Paper size:	Top bin:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
	Sort bins:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
Power supply	Drawn from the copier.	

4. SF-S15



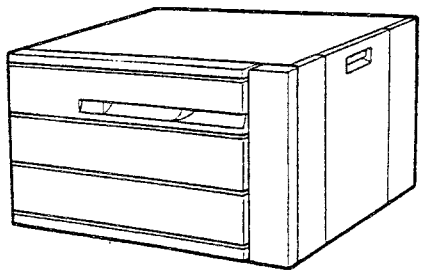
No. of bins	20	
Bin capacity	NON-SORT:	100 sheets (top bin)
	SORT:	50 sheets
	GROUP:	30 sheets
Paper size:	Top bin:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
	Sort bin:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
Power supply	Drawn from the copier.	

5. SF-S52



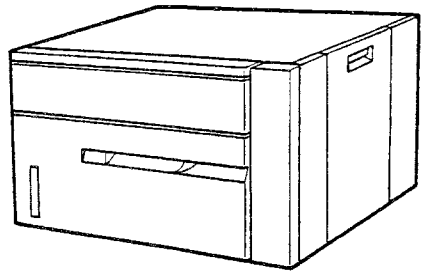
No. of bins	20	
Bin capacity	NON-SORT:	100 sheets for top bin
	SORT:	35 sheets (8½-" × 11") (A4) 25 sheets (8½" × 14") (B4) 15 sheets (11" × 17") (A3)
	GROUP:	25 sheets (8½" × 11") (A4) 15 sheets (8½" × 14") (B4) 10 sheets (11" × 17") (A3)
	STAPLE SORT:	25 sheets (8½" × 11") (A4) 15 sheets (8½" × 14", 11" × 17") (B4, A3)
Paper size	Top bin:	Max. 11" × 17", A3 Min. 8½" × 5½", A5
	Sort bins:	Max. 11" × 17", A3 Min. 8½" × 5½", A5
Stapling capacity	25 sheets (20 lbs.) (80 g/m^2)	
Power supply	Drawn from the copier.	

6. SF-D20



Paper size	8½" × 11" to 11" × 17", B5 to A3
Paper capacity	500 sheets of 20 lb. bond paper, 50 to 80 g/m^2 Total of 1,000 sheets of 20 lb. bond paper with an optional 500-sheet paper drawer installed.

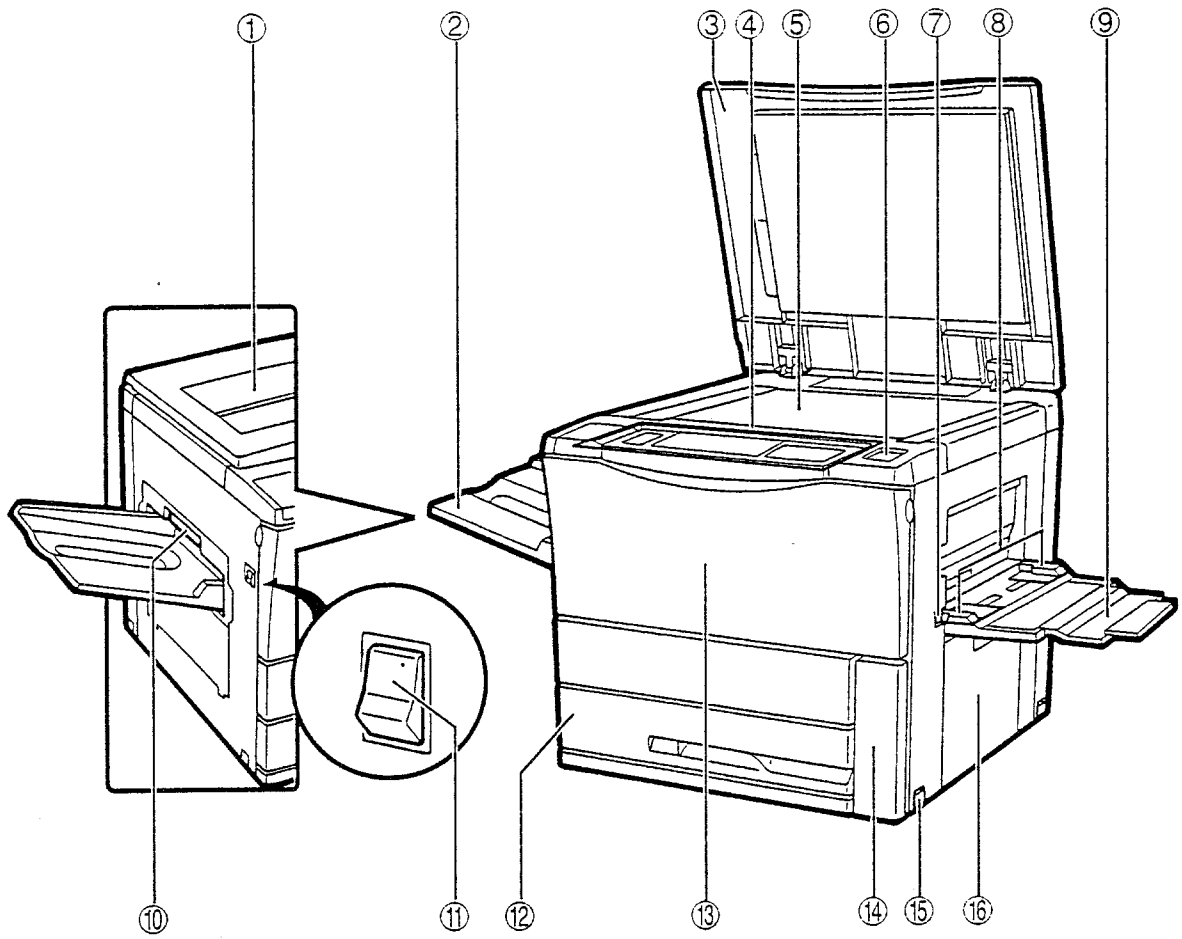
7. SF-D21



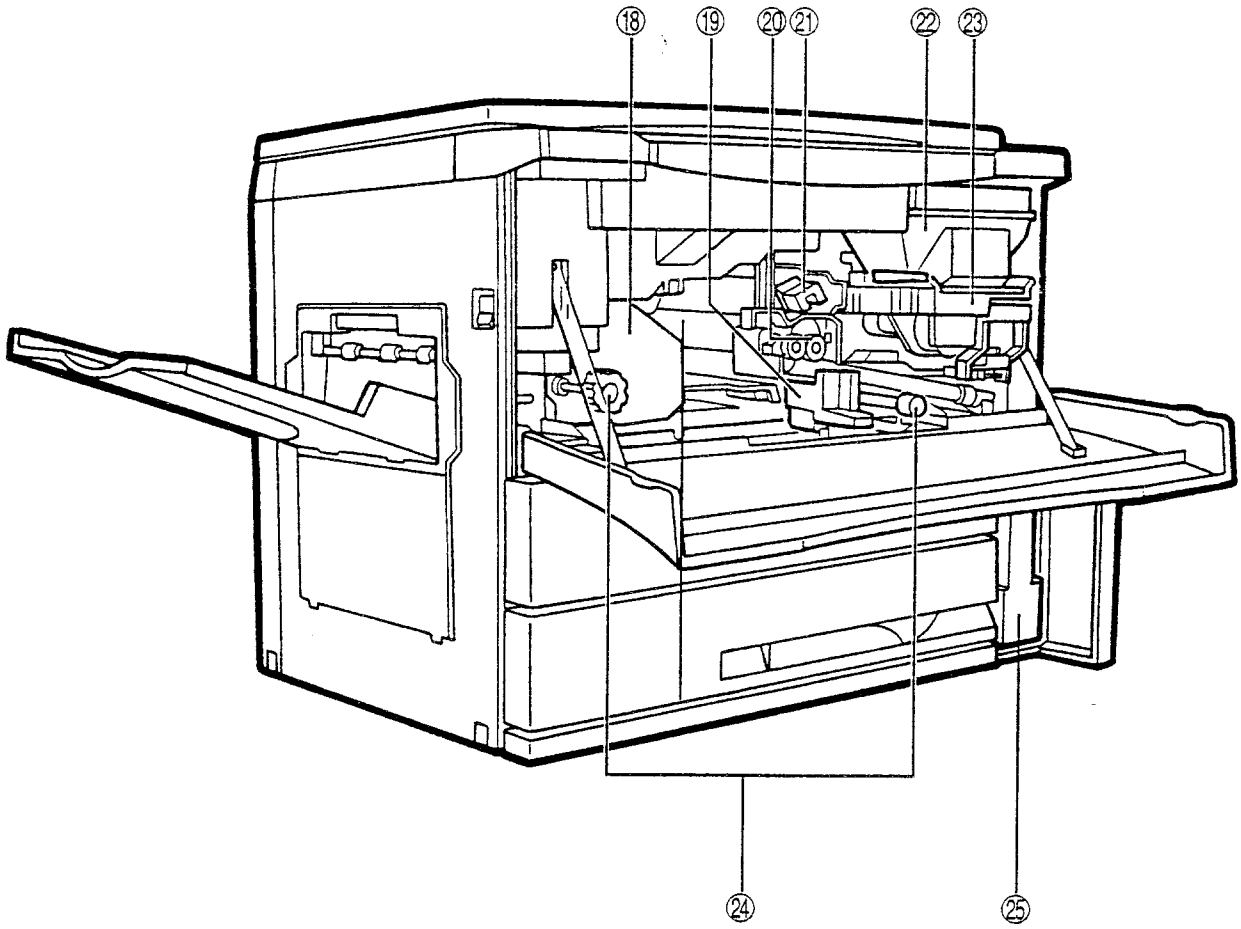
Paper size	8½" × 11" to 8½" × 14", B4 to B5
Paper capacity	1,000 sheets of 20 lb. bond paper, 50 to 80 g/m^2 Total of 1,500 sheets of 20 lb. bond paper with an optional 500-sheet paper drawer installed.

[4] COMPONENT IDENTIFICATION

1. External view

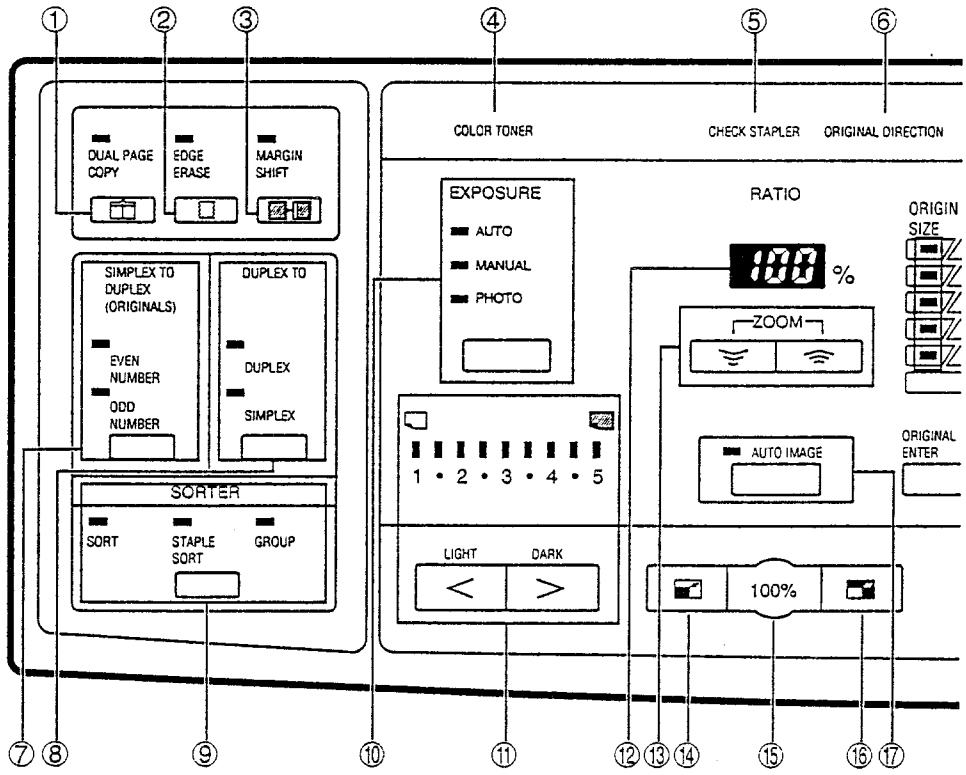


①	Original cover storage compartment	②	Copy receive tray	③	Original cover
④	Operation panel	⑤	Original glass	⑥	Paper clip tray
⑦	Paper feed tension release button	⑧	Paper feed guide	⑨	Manual paper feed tray
⑩	Exit panel release handle	⑪	Power switch	⑫	Paper feed cassette(module slots)
⑬	Front panel	⑭	Waste toner container access cover	⑮	Copier lift handle
⑯	Side panel				

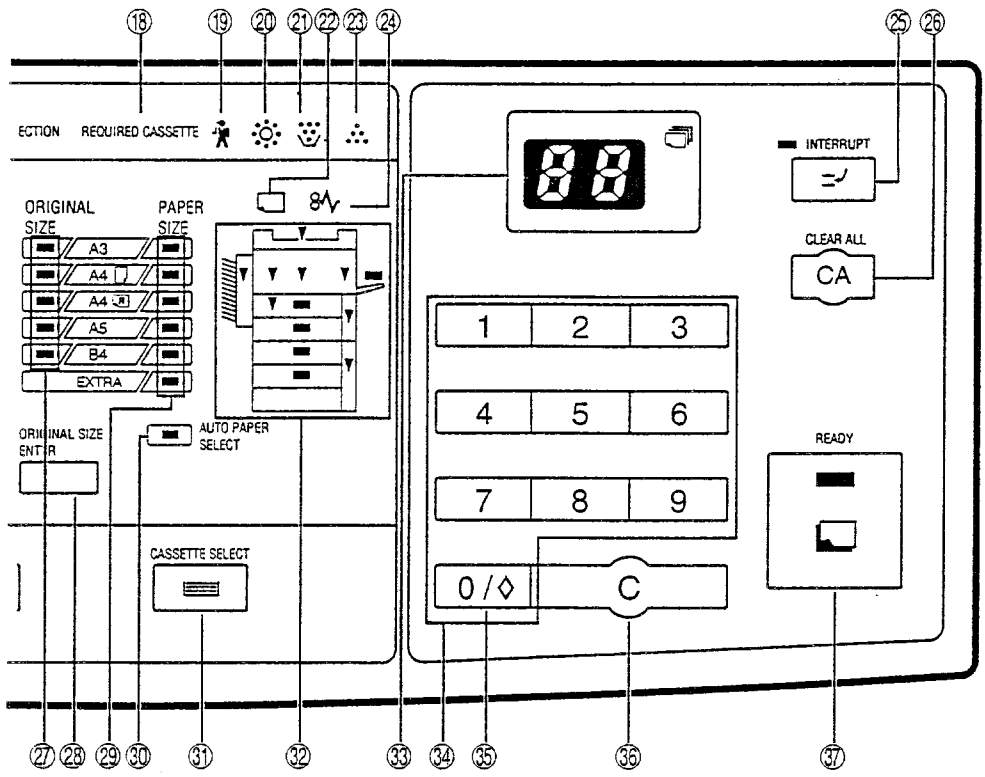


⑱	Fuser	⑲	Paper transport block accessing lever	⑳	Drum unit
㉑	Corona unit	㉒	Toner cartridge and lock lever	㉓	Developing unit and lock lever
㉔	Feed roller knobs	㉕	Toner collect container		

2. Operation panel

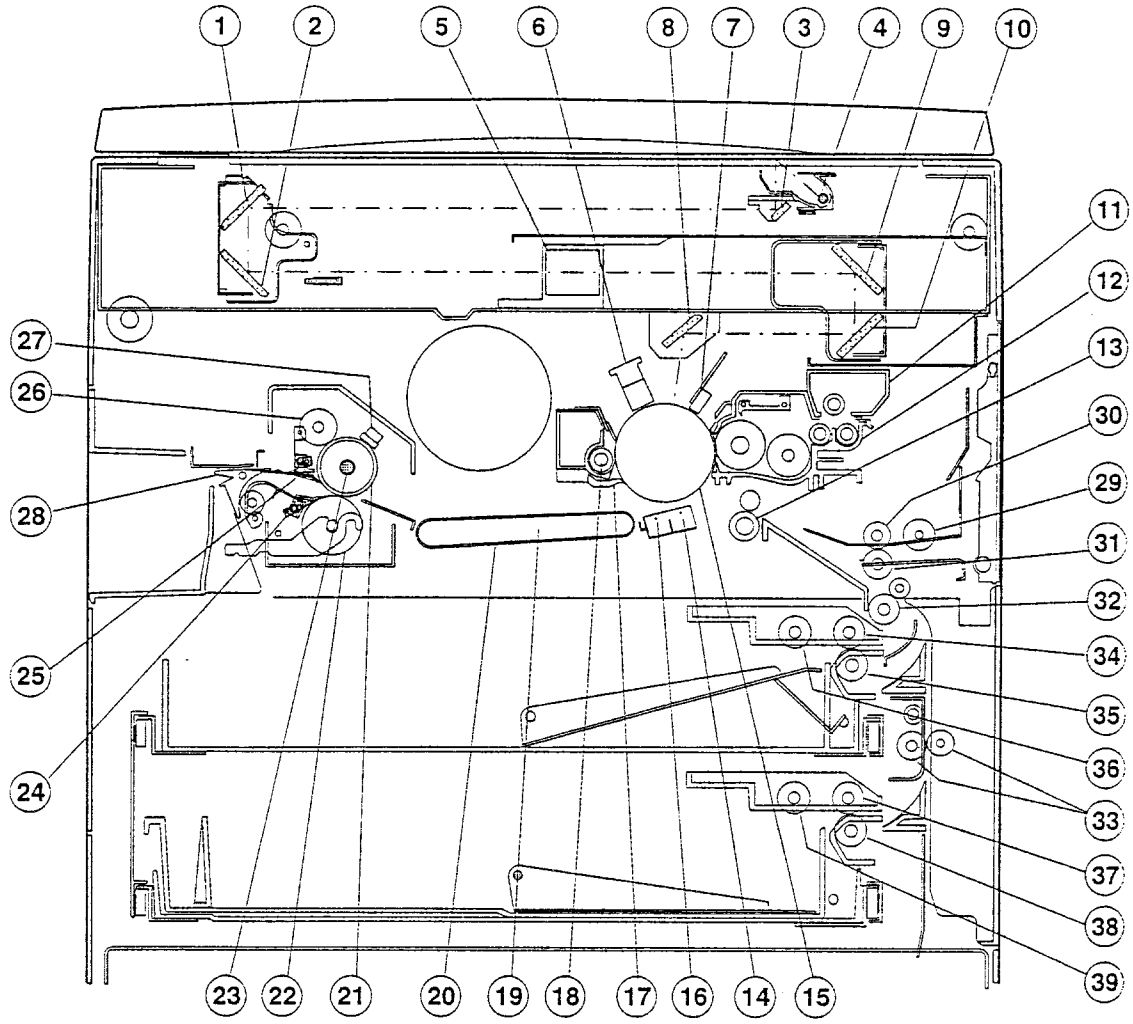


①	Dual page copy key/status lamp	②	Edge erase key/lamp	③	Margin shift key/status lamp
④	Color toner indicator lamp	⑤	Stapler status lamp	⑥	Original direction status lamp
⑦	Simplex to duplex copy key	⑧	Duplex original copy key	⑨	Sorter key/status lamp
⑩	Copy density select key/status lamp	⑪	Manual density control key/status lamp	⑫	Zoom ratio display
⑬	Zoom key	⑭	Reduce key	⑮	Normal ratio key 1:1
⑯	Enlarge key	⑰	Automatic zoom select key/status lamp		



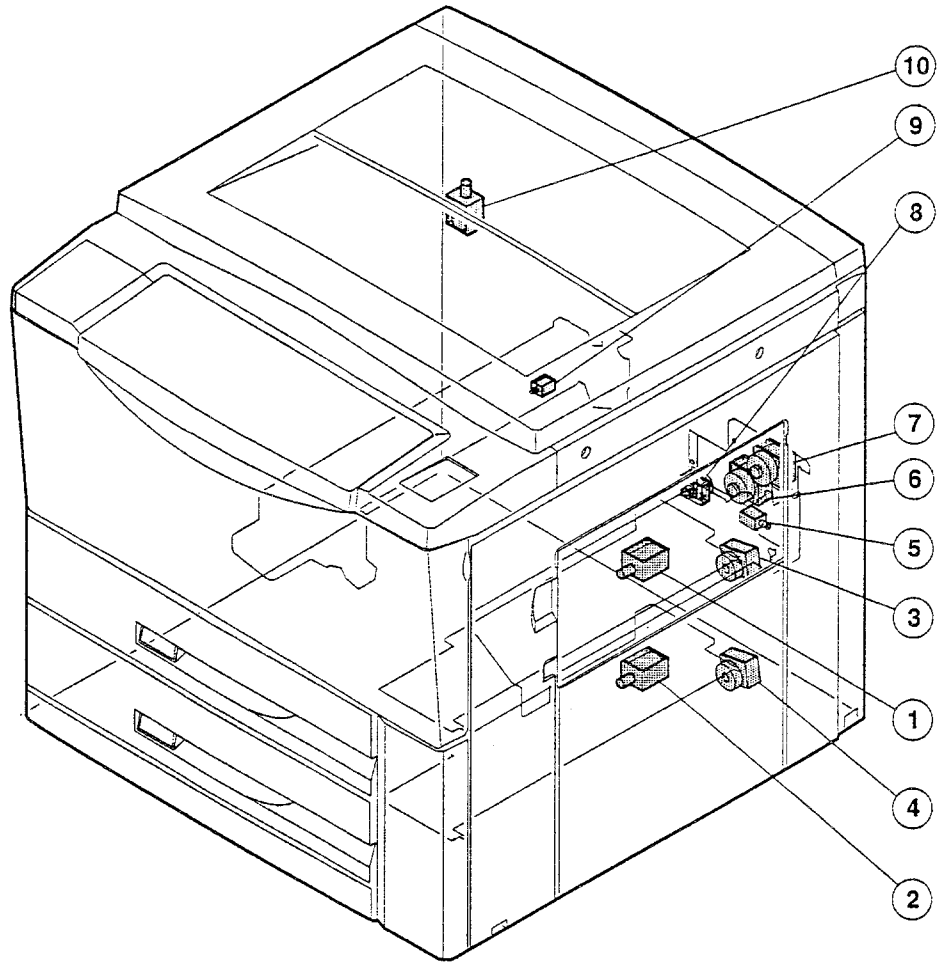
⑱	Copy paper size status lamp	⑲	Maintenance lamp	⑳	Developer replacement lamp
㉑	Toner collect lamp	㉒	Paper refill lamp	㉓	Toner refill lamp
㉔	Paper misfeed lamp	㉕	Pause key/status lamp	㉖	Clear all key
㉗	Original size display lamp	㉘	Paper size display lamp	㉙	Automatic paper select display lamp
㉚	Cassette select key	㉛	Paper location/misfeed lamp	㉜	Copy number window
㉝	Copy number entry key	㉞	Zero/read key	㉟	Cancel key
㊱	Print switch				

3. Internal view



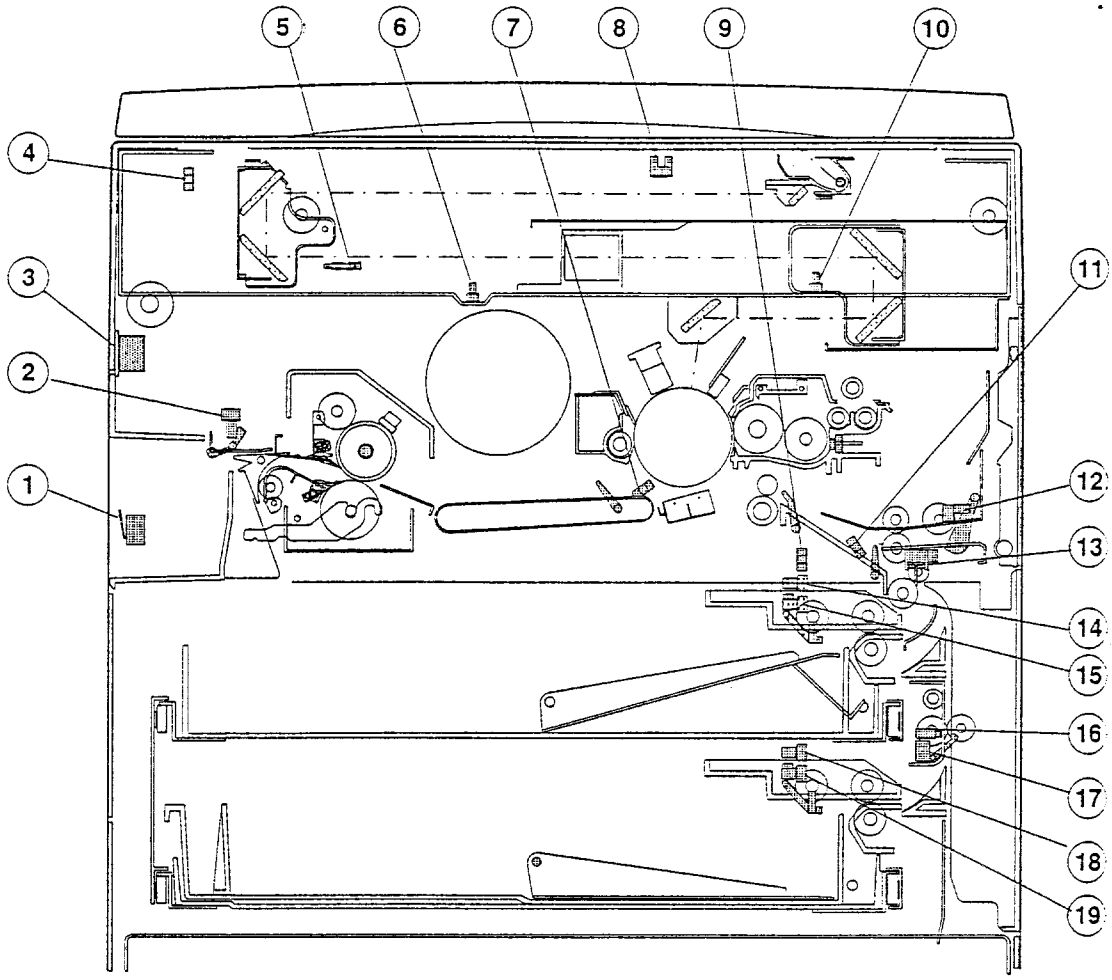
①	#2 mirror	②	#3 mirror	③	#1 mirror
④	Copy lamp	⑤	Lens unit	⑥	Main corona unit
⑦	Blank lamp	⑧	#6 mirror	⑨	#4 mirror
⑩	#5 mirror	⑪	Developing tank toner box	⑫	Developing tank
⑬	Resist roller	⑭	Transfer corona	⑮	Drum
⑯	Separation corona	⑰	Drum separator pawl	⑱	Cleaner unit
⑲	Suction unit	⑳	Suction belt	㉑	Upper heat roller
㉒	Lower heat roller	㉓	Heater lamp	㉔	Lower separator pawl
㉕	Upper separator pawl	㉖	Upper cleaning roller	㉗	Fuser thermistor
㉘	Delivery roller	㉙	Manual feed takeup roller	㉚	Manual feed paper feed roller
㉛	Counter manual feed roller	㉜	Transport roller (upper)	㉝	Transport roller (lower)
㉞	Upper paper feed roller	㉟	Retard roller	㊱	Upper paper takeup roller
㊲	Lower paper feed roller	㊳	Retard roller	㊴	Lower paper takeup roller

4. Clutches, solenoids



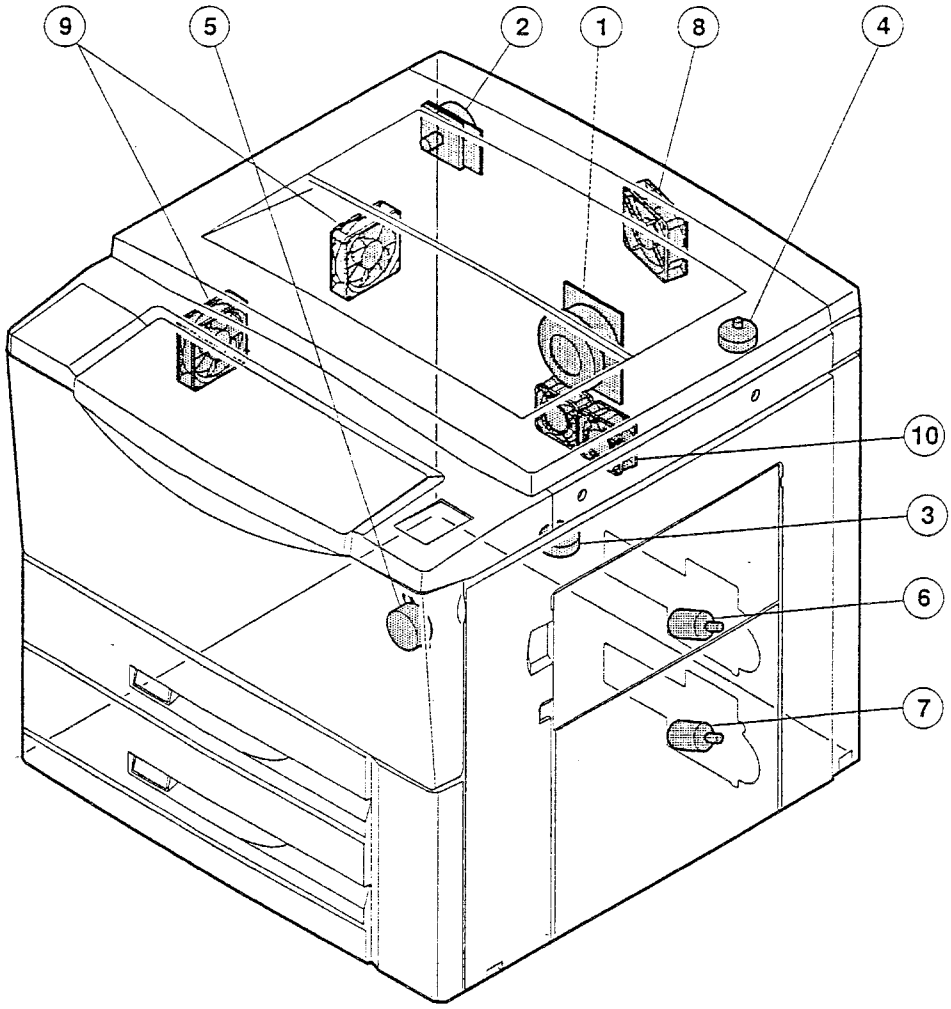
	Signal name	Name	Function
①	CPFS1	Upper cassette paper feed solenoid	For tensioning takeup roller
②	CPFS2	Lower cassette paper feed solenoid	For tensioning takeup roller
③	CPFC1	Upper cassette paper feed clutch	For actuating paper feed roller
④	CPFC2	Lower cassette paper feed clutch	For actuating paper feed roller
⑤	MPFS	Manual paper feed solenoid	For tensioning takeup roller
⑥	TRCL	Transport roller clutch (slow)	For actuating transport roller (slow)
⑦	TRCH	Transport roller clutch (fast)	For actuating transport roller (fast)
⑧	RRC	Resist roller clutch	For actuating resist roller
⑨	PSPS	Paper separation solenoid	For actuating paper separation solenoid
⑩	DGS	Double side gate solenoid	For actuating double side gate

5. SF-2022/2027 sensors



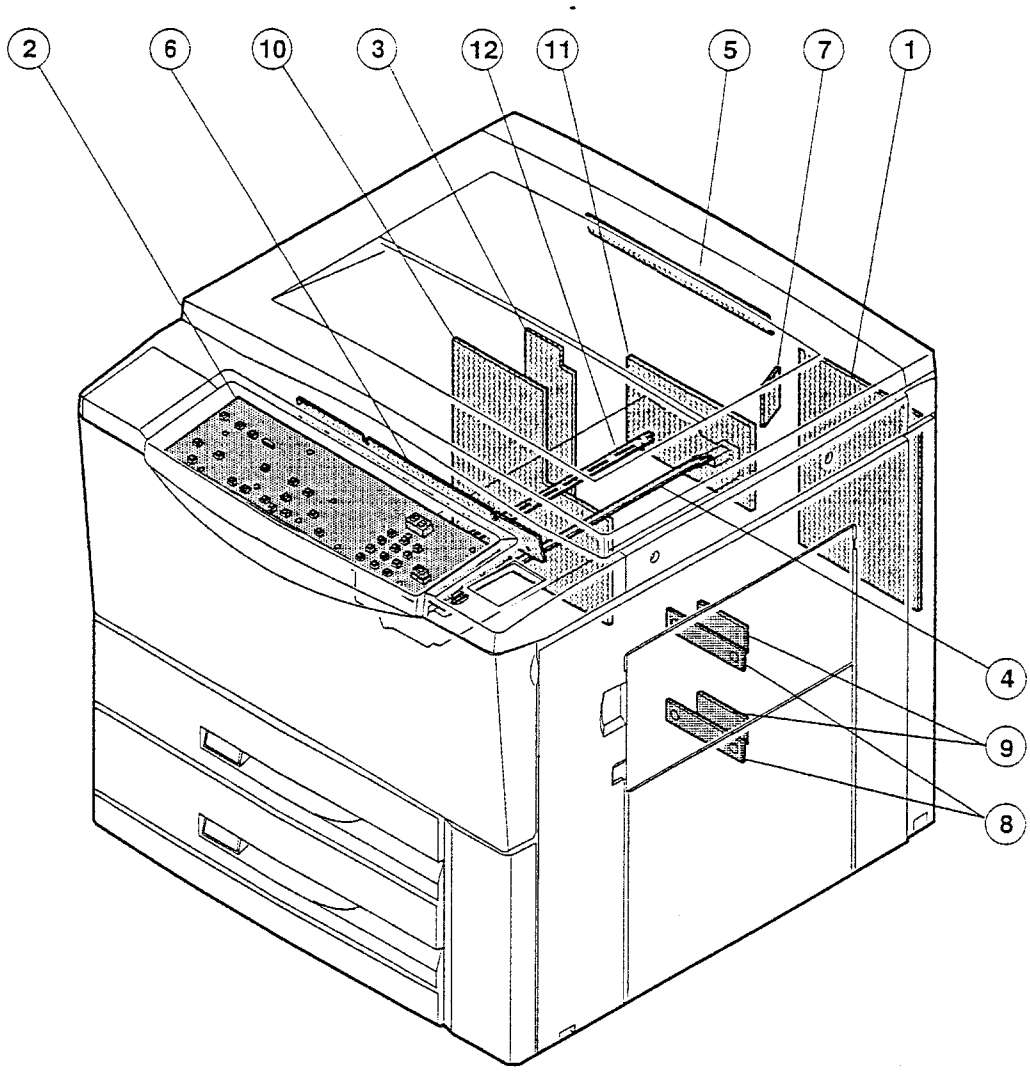
	Name	Type	Function	Output
①	CSWL	Microswitch	Cover switch, (left)	On when closed
②	POD	Transmissive photosensor	Paper exit sensor	Low when paper passes over
③	P-SW	See-saw switch	AC power switch	—
④	MHPS	Transimissive photosensor	Mirror home position sensor	High when scanner at home postion
⑤	CSWF	Microswitch	Cover switch, (front)	On when closed
⑥	LHPS	Transimissive photosensor	Lens home position sensor	Low when lens at home postion
⑦	PSD	Transimissive photosensor	Paper separation sensor	High when paper passes over
⑧	OCSW	Transimissive photosensor	Original cover switch	Low when cover is open
⑨	PPD2	Transimissive photosensor	Paper transport sensor	Low when paper passes over
⑩	MBHPS	Transimissive photosensor	Mirror home position sensor	Low when mirror at home position
⑪	PPD1	Transimissive photosensor	Paper transport sensor-1	Low when paper passes over
⑫	PED1	Transimissive photosensor	Manual feed paper sensor	Low when paper passes over
⑬	TFD	Transimissive photosensor	Full waste toner sensor	Low when full waste toner detected
⑭	LUD1	Transimissive photosensor	Upper cassette liftup sensor	Low when lift plate detected
⑮	PED2	Transimissive photosensor	Upper cassette paper sensor	Low when paper detected
⑯	CSWR	Microswitch	Doorswitch (right)	On when closed
⑰	PID	Transimissive photosensor	Paper transport sensor	High when paper passes over
⑱	LUD2	Transimissive photosensor	Lower cassette liftup sensor	Low when lift plate detected
⑲	PED3	Transimissive photosensor	Lower cassette paper sensor	Low when paper detected

6. Motors



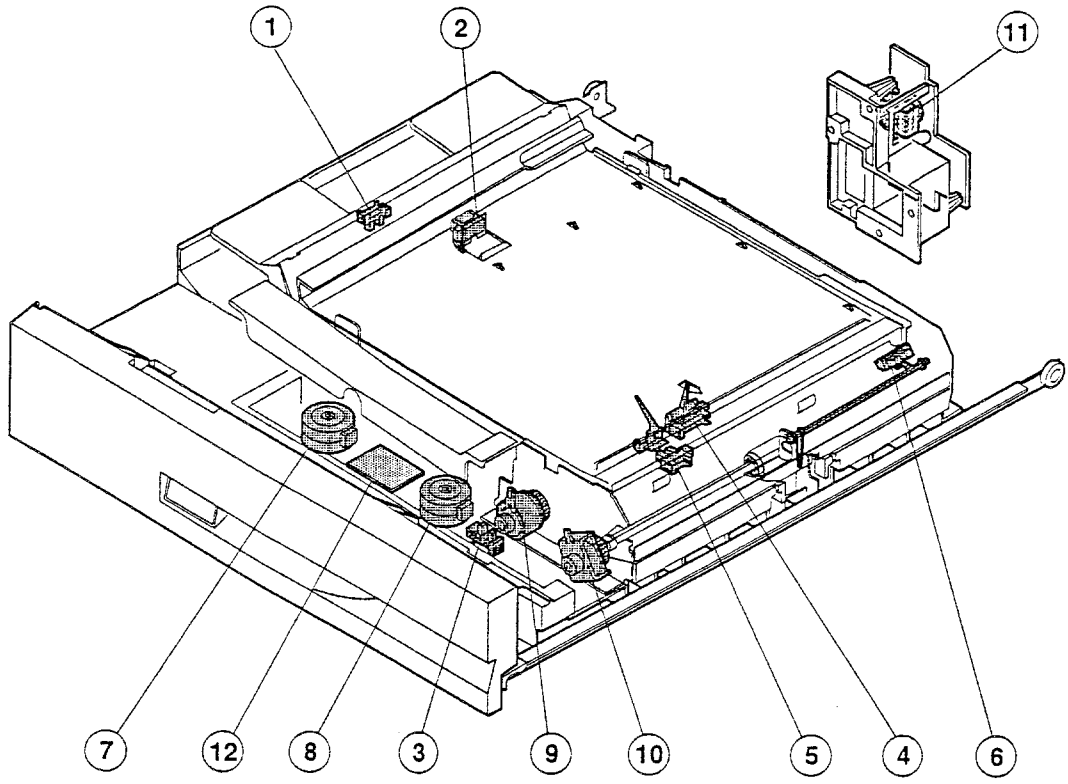
	Signal name	Name	Type	Function
①	MM	Main motor	DC, brushless	Driving copier and ADU option
②	SM	Mirror motor	DC, brushless	Driving optical system mirror bases A and B
③	LEM	Lens motor	DC, stepping	Driving optical lens
④	MBM	#4/5 mirror base motor	DC, stepping	Driving optical mirror base C
⑤	TM	Toner motor	DC, synchronous	Supplying toner
⑥	LUM1	Upper cassette liftup motor	DC, brush	Lifting upper paper feed cassette baseplate
⑦	LUM2	Lower cassette liftup motor	DC, brush	Lifting lower paper feed cassette baseplate
⑧	CFM	Cooling fan motor	DC, brushless	Cooling optical system
⑨	VFM	Ventilation fan motor	DC, brushless	Ventilating fuser area
⑩	SFM	Suction fan motor	DC, brushless	Ventilating process unit area

7. Board list



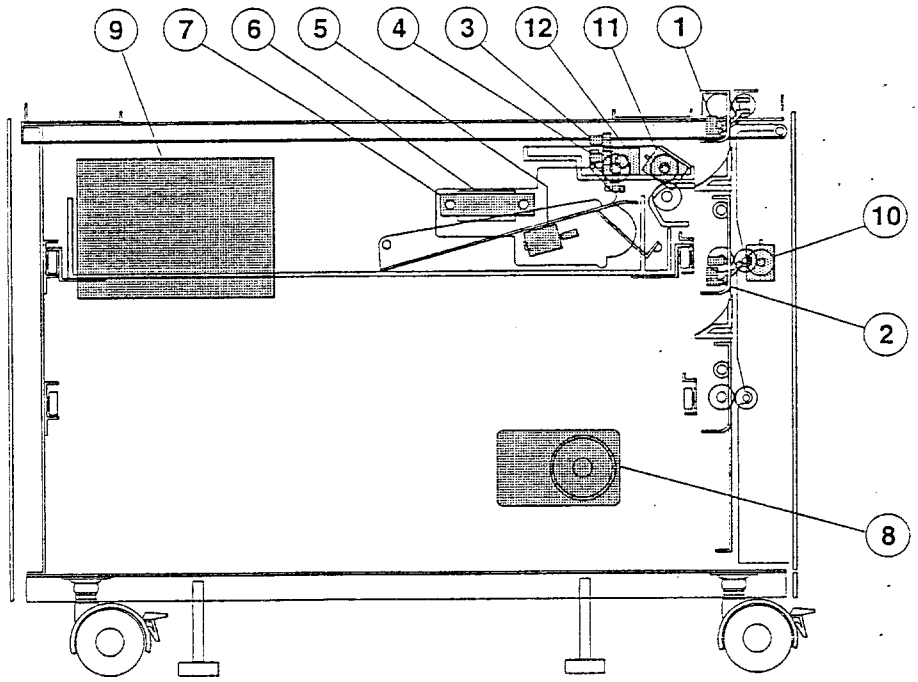
	Name	Type	Note
①	Main PWB	Common	Controlling mains
②	Operation PWB	Common to Japan models, export 2022, 2027	Controlling operator input, display
③	AC PWB	Common to Japan models, export 100V, 200V	Supplying AC power
④	Blank lamp PWB	Common	Controlling blank lamps
⑤	Original sensing light emitting PWB	Common to Japan models, export 2027	Sensing original size
⑥	Original sensor light receive PWB	Common to Japan models, export 2027	Sensing original size
⑦	AE PWB	Common	Automatic exposure sensor
⑧	Cassette paper size PWB	Common	Sensing cassette paper size
⑨	Liftup motor PWB	Common	Driving paper cassette bottom plate liftup
⑩	DC power supply unit	100V/200V series	Supplying DC power
⑪	High voltage transformer	Common	Supplying process unit high voltage and developing bias voltage
⑫	Discharge lamp	Common	Driving discharge lamps

8. Duplex copy tray



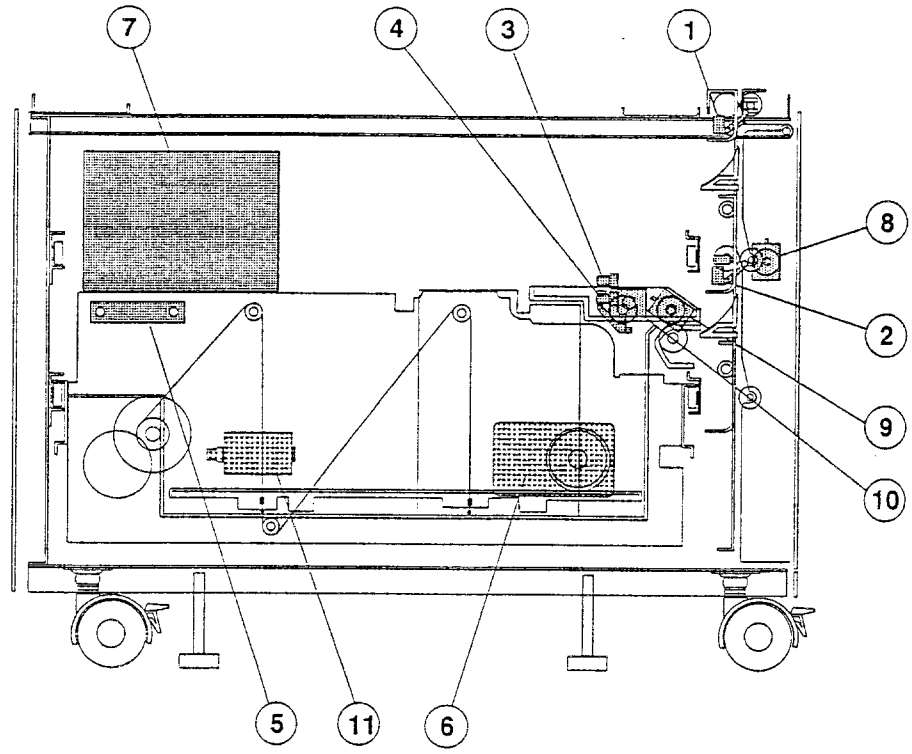
	Signal name	Type	Name	Output
①	APHPS2	Transimissive photosensor	ADU rear plate home position sensor	Low when at home position
②	DPPD1	Transimissive photosensor	ADU paper transport sensor-1	High when paper passes over
③	APHPS1	Transimissive photosensor	ADU alignment plate home position sensor	Low when over home position
④	DPP2	Transimissive photosensor	ADU paper transport sensor-2	High when paper detected
⑤	DTPID	Transimissive photosensor	ADU tray sensor	High when paper detected
⑥	DPFD	Transimissive photosensor	ADU paper entry sensor	High when paper detected
⑦	PAM2	DC stepping motor	ADU rear plate motor	
⑧	PAM1	DC stepping motor	ADU alignment plate motor	
⑨	DPFC	Magnetic clutch	ADU paper feed clutch	
⑩	DRRC	Magnetic clutch	ADU counter roller clutch	
⑪	DDC	Magnetic clutch	ADU clutch	
⑫	ADUPWB	Duplex copy tray load driving	Diode PWB	

9. Desk unit (SF-D20)



	Signal name	Name	Function
①	DPOD1	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
②	DPOD2	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
③	DLUD1	Desk cassette liftup sensor	Cassette liftup sensor (Low when lift plate detected)
④	DPED1	Desk cassette paper sensor	Cassette paper sensor (Low when paper detected)
⑤	DLUM1	Desk cassette liftup motor	Cassette liftup drive motor
⑥	—	Liftup motor PWB	—
⑦	—	Cassette paper size PWB	—
⑧	DM	Desk drive motor	Desk main motor
⑨	—	Desk main PWB	—
⑩	DTRC	Desk transport roller clutch	Transport roller drive
⑪	DPFC1	Desk paper feed clutch	Paper feed roller drive
⑫	DPFS1	Desk paper feed solenoid	Paper takeup roller drive

10. Desk unit (SF-D21)



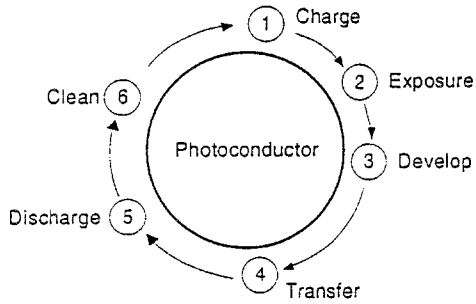
	Signal name	Name	Function
①	DPOD1	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
②	DPOD2	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
③	DLUD2	Desk cassette liftup sensor	Cassette liftup sensor (Low when lift plate detected)
④	DPED2	Desk cassette paper sensor	Cassette paper sensor (Low when paper detected)
⑤	—	Cassette paper size PWB	—
⑥	DM	Desk drive motor	Desk main motor
⑦	—	Desk main PWB	—
⑧	DTRC	Desk transport roller clutch	Transport roller drive
⑨	DPFC2	Desk paper feed clutch	Paper feed roller drive
⑩	DPFS2	Desk paper feed solenoid	Paper takeup roller drive
⑪	LCCM	Large capacity cassette motor	Cassette tray liftup drive motor

[5] Process (Photocondor drum and cleaning unit)

1. Basic theory

With the indirect static copier, a plain paper is used for the copy paper. As a latent static image is formed on the surface of the photoconductor, the image is then developed into visible (toned) image using the toner. Then the toner is transferred onto the copy paper.
The plain paper copier (PPC) has six basic processing steps of corona charge, exposure, development, transfer, discharge, and cleaning. The cleaning step prepares the photoconductor surface for repeated use.

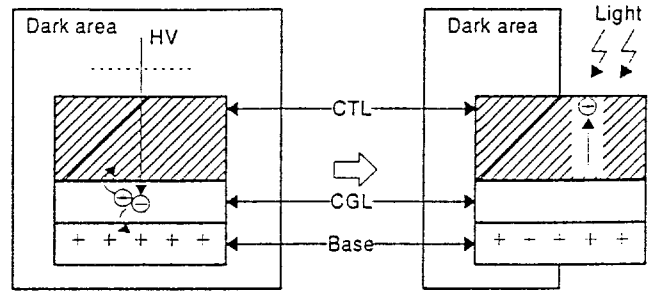
(1) Image forming process



① Corona charges the photoconductor.
② The photoconductor is exposed to light to form a static latent image.
③ Toner is attracted to the static latent image.
④ The toner on the drum is transferred onto the copy paper.
⑤ The charge remaining on the photoconductor surface (residual charge) is removed.
⑥ Toner remaining on the photoconductor (residual toner) is removed.

(2) Photoconductor

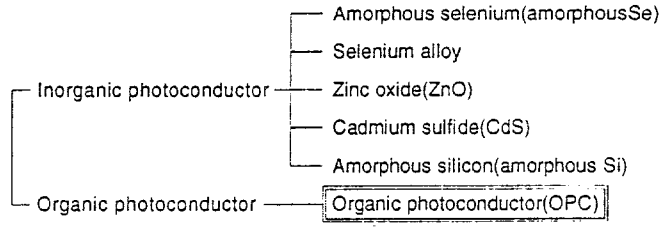
While some materials conduct electricity, others do not. Materials, therefore, can be put into three categories of conductor, semiconductor, and insulator.
For these categories are conceptual, distinct classification is difficult. Generally, the following is applied.
Material whose specific resistance is over $10^3\Omega$cm is called insulator and under $10^{-3}\Omega$cm is called conductor.
Those which existing between the two is normally called semiconductor.
Conductor in the category always has the electrical conductivity, while semiconductor does not. But, it may become conductor under certain conditions.
The photoconductor used by the copier is an insulator when not exposed to light, but its electrical resistance abates when exposed to light. When exposed to light, the photoconductor surface becomes conductive. Material having the property to become conductive in light (photo conductive phenomenon) is a photoconductor or photosemiconductor.



Theory of photoconduction

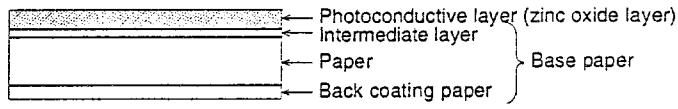
(3) Types of photoconductors

The pricipal materials of a photoconductor are zinc oxide (ZnO), amorphous selenium (amorphous Se), selenium alloy, cadmium sulfide (CdS), amorphous silicon (amorphous Si), and organic photoconductor (OPC).

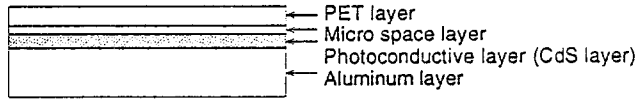


Described next are structures of the photoconductors we have used up to now.

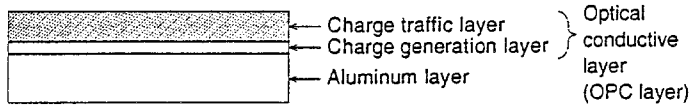
Zinc oxide (ZnO) master



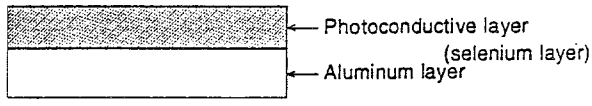
Cadmium sulfide (CdS) drum



Organic photoconductor (OPC) master and drum



Selenium (Se) drum



	Zn0	OPC	CdS	Se
Photoconductor sensitivity	④	③	②	①
Photoconductor strength	④	③	②	①
Photoconductor life	Several hundred cycles	Several ten thousand cycles	Several ten thousand cycles	Several hundred thousand cycles

Photoconductor characteristics

① > ② > ③ > ④

Characteristics of organic photoconductors

- Permits a variety of structures (drum, sheet, belt)
- Higher insulation in dark area (charge acceptability and retentivity)
- Permits a variety of molecular structure (allows a variety of molecular design)
- Light weight
- Stable against humidity and temperature
- Safety for environment (non-pollution, unrestrained disposal)
- Not strong in anti-wear property
- Not strong against light and ozone.

(4) Characteristics of photoconductor

Mentioned next is the general characteristics important to use for the photoconductive material.

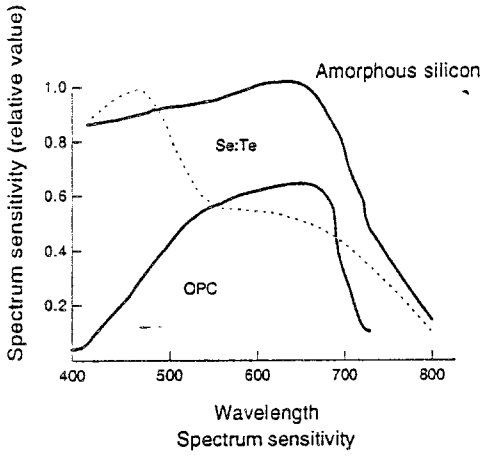
1. Photo-sensitivity
2. Spectrum characteristics
3. Acceptor potential
4. Charge retentivity
5. Residual potential
6. Fatigue

[Photo-sensitivity]

This is dependent on the attenuation speed of the potential when the photoconductor is exposed to light.

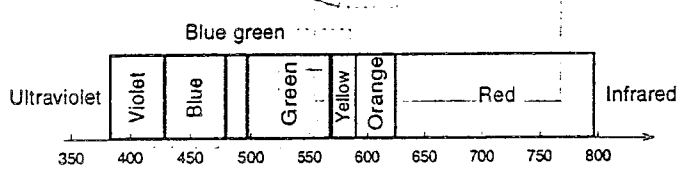
[Spectrum characteristics]

Wave length of the light differs by the kind of the photoconductor.



Relationship between color and wave length

Light having wave length of 380mm through 780mm can be recognized by human eyes, which is called visible light. Wave length shorter than that is called ultraviolet light and the longer than that is called infrared light. Figure below shows the relationship between the wave length of light and color.



[Acceptor potential]

The resistance in the dark area of the photoconductor decreased as the electric field increases among layers.

As the electric field is formed to a higher value as the photoconductor is charged, the resistance in the related layer decreases and the rate of charge retained in the photoconductor is restricted. The potential of the photoconductor in this instance is called acceptor potential which is the important factor to determine the potential contrast. To avoid giving electrical distortion in the photoconductor, charge is normally made to a level slightly lower than the acceptor potential.

[Charge retentivity]

The time the static latent image is held by the photoconductor depends on the speed at which the potential decreases in the dark area. For this, measure the time the photoconductor potential abates to a half of the starting value in the dark area. This charge retentivity may cause a problem when the time from the exposure to the development is long. But, it may not be a problem with the machine where a series of operations from charge, exposure, and development are automated and time between processes is shorter.

[Residual potential]

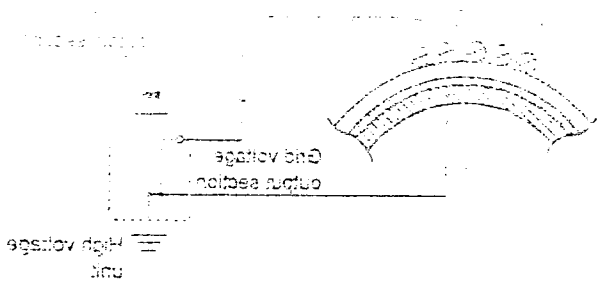
When the charged photoconductor is exposed to light, the potential abruptly diminishes at first, then begin decaying relatively slowly. The potential of the photoconductor where slow decay starts is called residual potential. For a less residual potential produces a large potential contrast, low residual charge is preferable.

The value of the residual potential affects largely to the development of gradual tone.

[Fatigue]

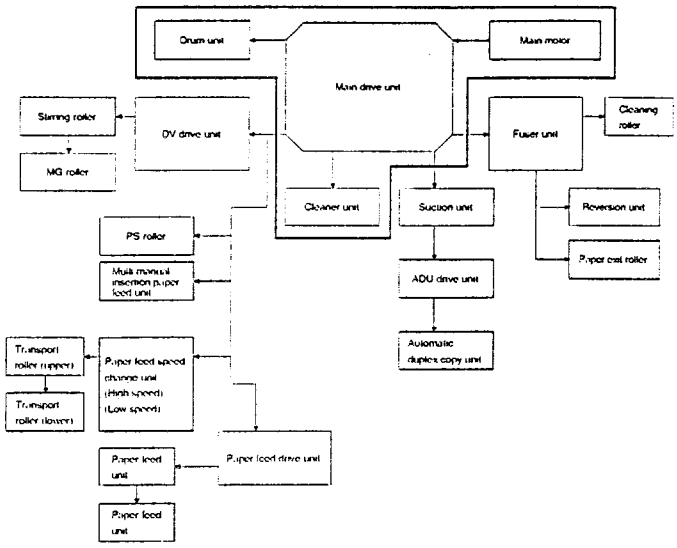
If charge and exposure are repeated, the phenomenon called photoconductor fatigue occurs. In other words, it appears as an increase of the decay speed of the photoconductor potential or a decrease in the charge retentivity.

Now, we have learned about the characteristics required for charging of the photoconductor. If charge is repeated from the corona unit in the actual operation, the corona wire is likely to be contaminated with dust, stain, and scattered toner, causing uneven corona charge. To avoid this, the corona wire needs to be cleaned well.



2. SF-2022/2027 basic process and structure

- The Scorotron method is used to evenly charge the photoconductor surface to the given potential in the charge process. The corona wire regularly used is now replaced with a new corona charge mechanism that employs the 0.1mm thick stainless steel saw teeth plate, in order to suppress ozone generated when the oxide molecule in air is ionized.
- Considering the service efficiency, the process separation mechanism is adopted.
- To prevent high voltage leakage by the loose corona charge unit, a one-touch stopper mechanism is adopted.



Drive system diagram

(1) Details of image forming process

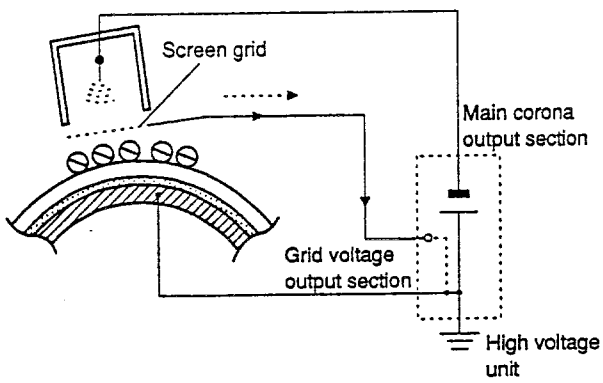
STEP 1. Charging (DC-700μA)

(grid voltage refer page 8-1)

The main corona discharges negative corona to give negative charges to the OPC drum surface evenly.

The surface potential of the OPC drum is controlled by the screen grid voltage to maintain at the potential equal to the grid voltage.

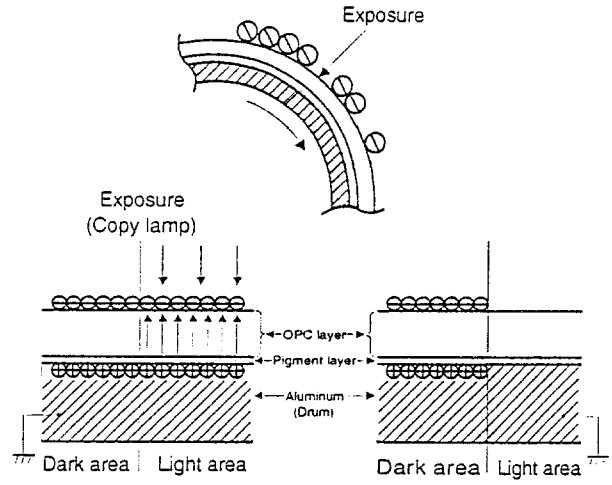
- When the drum surface voltage is lower than the screen grid voltage, electric charges from the main corona pass through the screen grid to reach the drum surface and charge it until the drum surface voltage becomes equal to the grid voltage.
- When the drum surface voltage reaches almost the same level as the grid voltage, electric charges from the main corona flow through the electrode of the screen grid to the high voltage unit grid voltage output circuit, thus maintaining the drum surface voltage at the same level as the grid voltage.



STEP 2. Exposure (Copy lamp, mirror, lens)

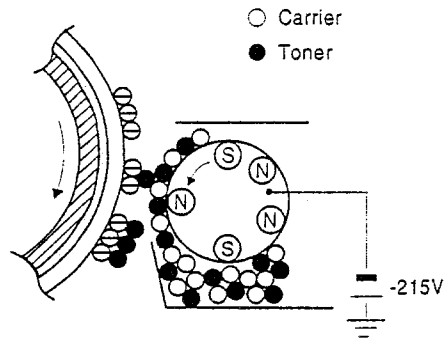
The optical image of an original is projected through the mirror and lenses onto the OPC drum surface by the copy lamp. The resistance of the OPC layer reduces in the bright area (light area on the original) to discharge negative charge, forming an electrostatic latent image on the drum surface.

In reduction copy, the non-image area of the image is discharged by the BL (blank lamp) before exposure.



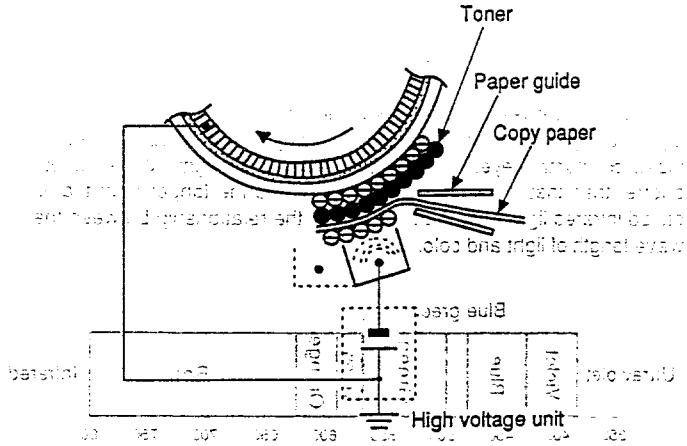
STEP 3. Development (Bias –215V)

The electrostatic latent image on the drum surface is formed into a visible image by the toner. This copier employs the two-component magnetic brush development system, where a bias voltage of –215V is applied to the carrier (MG roller) and the toner is charged positively by friction with the rotating carrier.



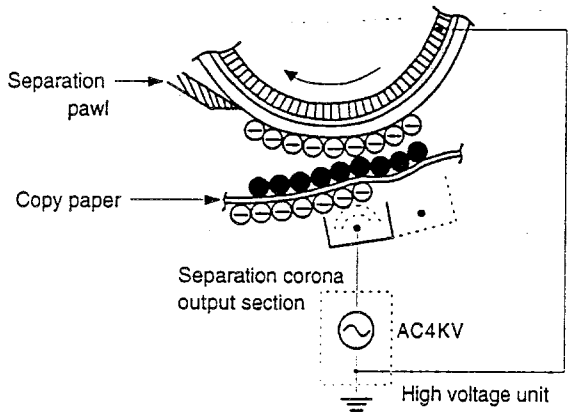
STEP 4. Transfer (DC –31μA)

The visible image on the drum surface is transferred on to the copy paper. A negative charge of the transfer corona is applied to the rear surface of the copy paper to transfer the toner on the drum surface to the copy paper.



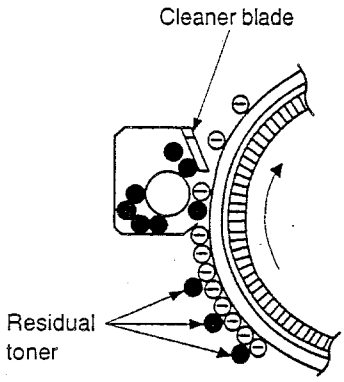
STEP 5. Separation (AC4KV)

Though the copy paper and the drum are both negatively charged after transfer, the negative potential on the drum is higher than that on the copy paper, generating an attraction force between the drum and the copy paper. To remove the attraction force, AC corona is applied to the copy paper by the separation corona to raise the potential on the copy paper to the same level as the drum surface potential. Resultantly the attraction force is eliminated and the copy paper is separated from the drum. If the paper is not separated from the drum, the separation pawl works to separate it mechanically.



STEP 6. Cleaning

Residual toner on the drum is collected by the cleaning blade.



STEP 7. Discharge

The electric resistance of the OPC layer is reduced by radiation from the discharge lamp over the drum to remove residual charges.

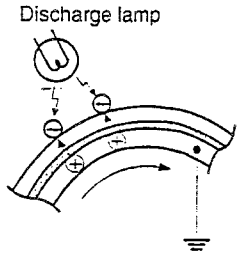
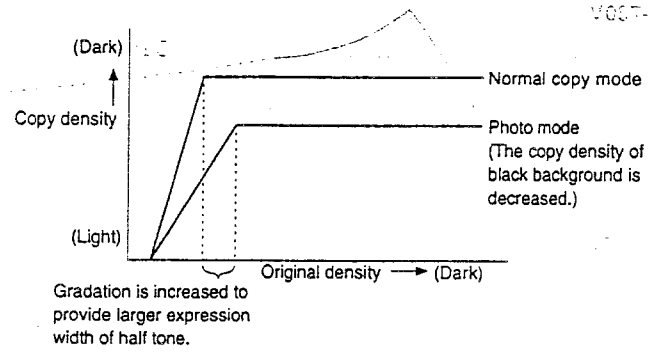


Photo mode

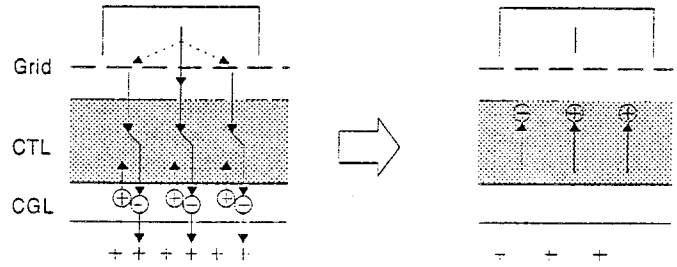
The photo mode is provided to make clear half-tone copy of the photo originals.

In the photo mode, the grid voltage and the copy lamp voltage are lowered than in the standard copy mode (the copy density of the black background is lowered) to provide half tone graduations of the copy.

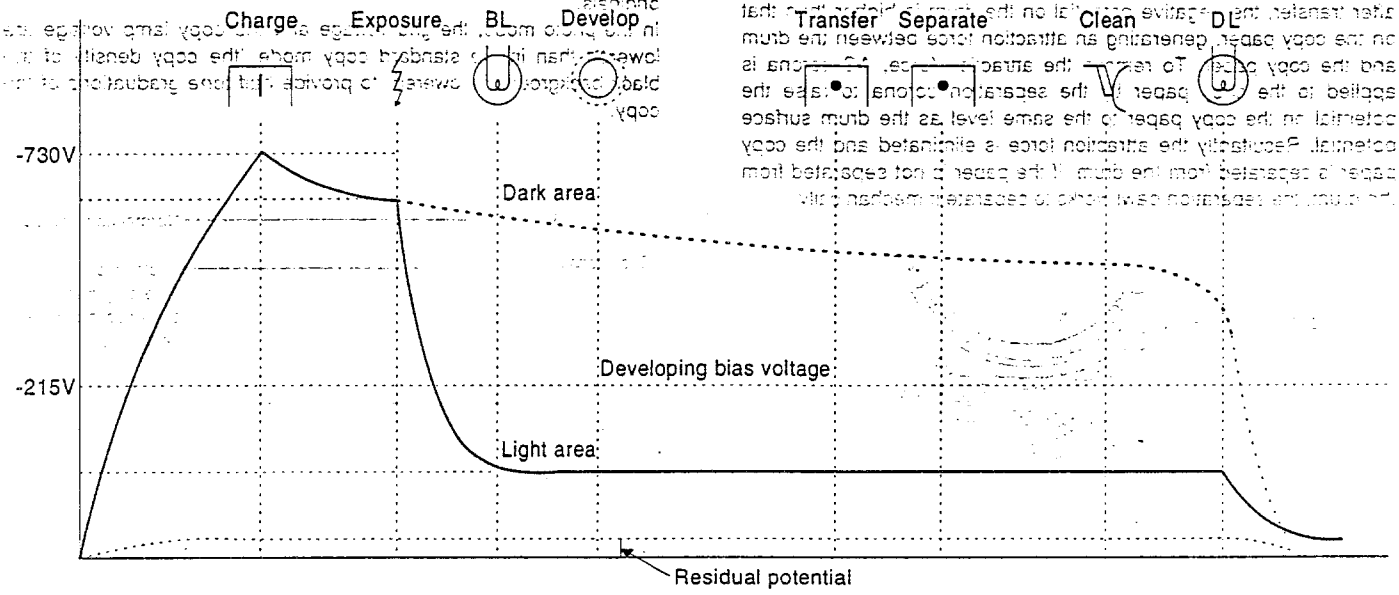

(Dark)
Copy density
(Light)
Normal copy mode
Photo mode
(The copy density of black background is decreased.)
Original density → (Dark)
Gradation is increased to provide larger expression width of half tone.

(2) Relationship between the OPC drum and light

The light exposed is absorbed by the charge carrier generation layer (CGL) to generate the charge carrier and moves towards the charge carrier transport layer (CLT). The carrier reached CTL then moves towards the drum surface through CTL to neutralize the surface charge.

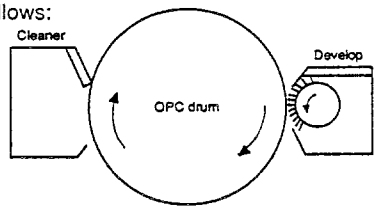


(3) Transition of photoconductor surface potential

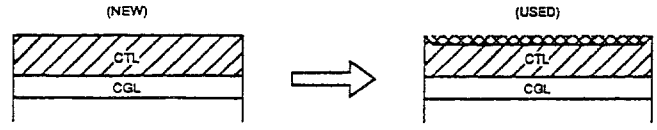


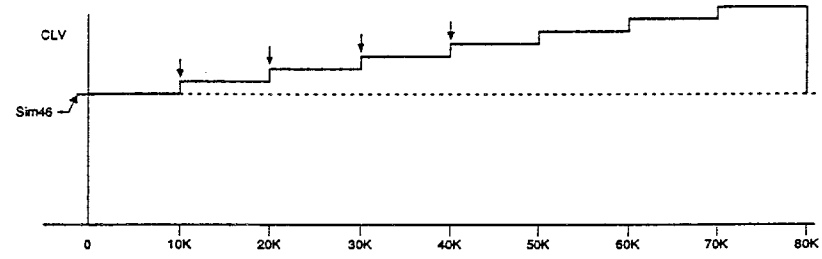
(4) Photoconductor drum sensitivity correction

In the SF-2022/2027, fall in sensitivity due to long use of the photoconductor drum is corrected by the copy lamp light intensity to prevent against considerable change in copy quality.
The photoconductor drum sensitivity fall correction is performed as follows:



Change the tickness of the carrier transport layer (CTL).
By the developper.
By the cleaner blade.





CLV + 2 counts ⟹ CL(V) + (0.33V x 2)
(Sim46)

3. Basic structure

Photoconductor drum:	The 65mmϕ ground plate of the OPC drum is on the rear frame side of the drum unit so that it contacts the drum locator pin.
Blank lamp:	The non-image area is exposed by the light from the blank lamp to erase the positive potential outside the drum CTL. Use of the latchet simplifies the lamp position adjustment.
Discharge lamp:	Eight bulbs cast light over the drum surface to erase the positive potential in CTL. Ventilation hole provided in the drum frame releases heat from bulbs.
Cleaning mechanism:	The cleaning blade removes the toner remaining on the drum surface. The blade always rests on the drum surface.
Main corona:	The saw teeth corona charge method is used. Use of the screen grid maintains the even charge potential over the photoconductor surface.
Enforced separation mechanism:	Using two pieces of separation pawl, the copy paper stuck over the drum surface is forced to separate from the drum surface.
Waste toner transport mechanism:	To enhance the toner transport efficiency, the transport pipe is used and toner back-up is avoided by setting the waste toner transport path downward.

[6] DEVELOPING UNIT

1. Basic theory

(1) Two-component developer

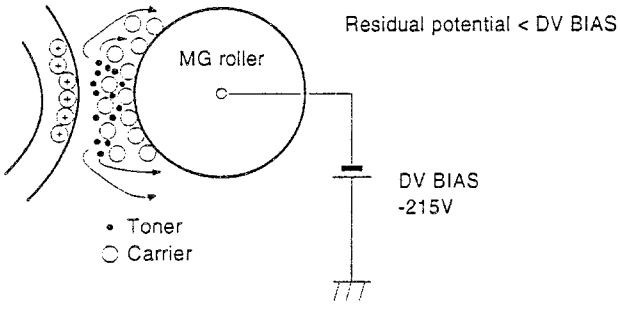
The developer consists of toner and carrier, which is usually called developer.
The carrier is a media that applies toner to the static latent image on the photoconductor.
As the carrier is stirred with the toner, the friction occurred thereby charges it to positive or negative.
Because the developer fatigues and affects its characteristics that deteriorates the copy quality, it needs to be replaced with a fresh one at a given period.

(2) Two-component magnetic brush development

A rotary, non-magnetic sleeve is provided over the magnet roller and is rotated.
Carriers forms the magnetic brush on the sleeve surface by magnetic force to make toner be attracted onto the latent electrostatic image on the photoconductor.

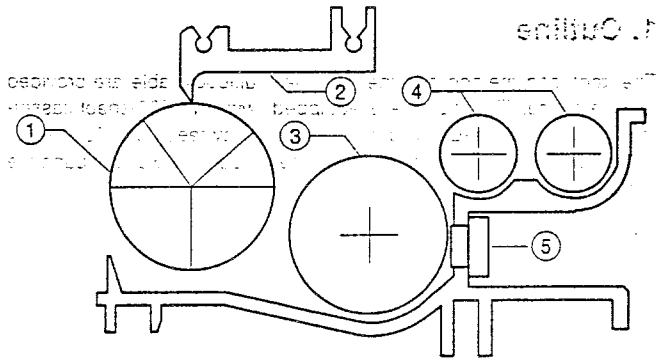
(3) Developing bias voltage

When the photoconductor is exposed to light, the surface potential (voltage) of the photoconductor is not removed completely and remains as a residual potential. Therefore, the toner stuck on the photoconductor by the residual potential stains a white area of the copy background.
To prevent this, a voltage of the same charge on the photoconductor surface which is higher than the charged potential is added to the magnetic roller to avoid the toner from remaining on the photoconductor surface.



Developing bias voltage

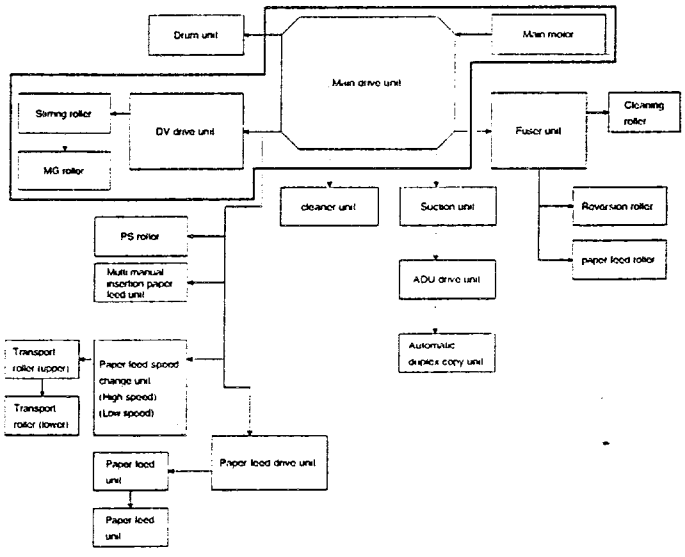
2. Structure



No.	Name	
①	Developer mangetic roller	Magnetic brush is formed to the carrier by the magnetic force.
②	Developer doctor plate	A plate employed to limit the height of the magnetic brush.
③	Developer stirring roller	Carrier within the developing unit is stirred to distribute the toner evenly.
④	Developer transport roller	The toner fed from the toner hopper is supplied to the stirring unit.
⑤	Toner density sensor	Used to detect the density of the toner contained in the developer.

3. Operation

When the power is turned on, the machine goes into the warmup mode and the main motor starts to run in 1.5 minutes.
The developer unit is driven by the main motor via the main drive unit.
Ratio of the carrier and the toner within the developing unit is monitored by the toner density sensor as a change in the magnetic transmission rate and the voltage is sent to the analog input line of the CPU of the main board.
In the CPU, the input voltage level is monitored and the main motor and the toner motor is controlled until the optimum density is obtained. Then the toner is supplied, transported, and stirred.



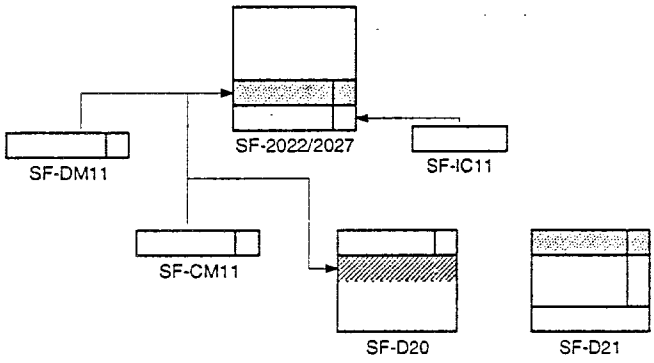
Drive system diagram

[7] PAPER FEED UNIT

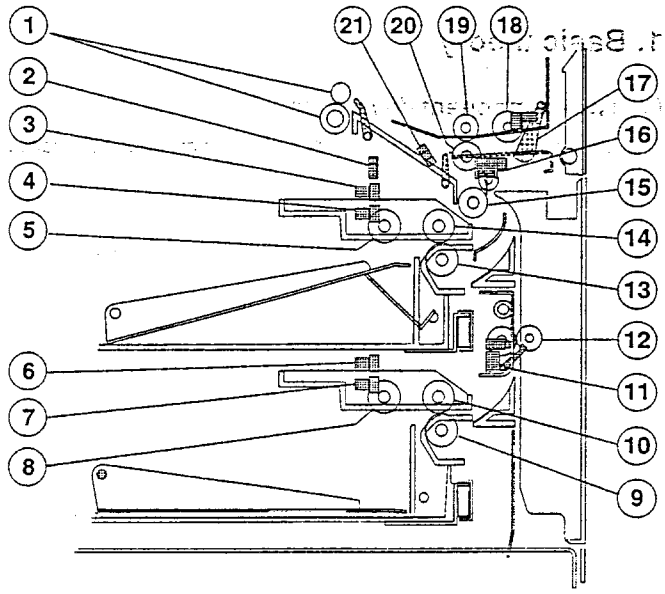
1. Outline

The front load method and the foldable multicopy table are provided to save space. The machine is equipped with two 500-sheet cassettes and a manual feed multicopy table that may feed up to 50 sheets. Use of a desk unit option and a cassette module allows to expand the system.

Standard setting



2. Basic configuration

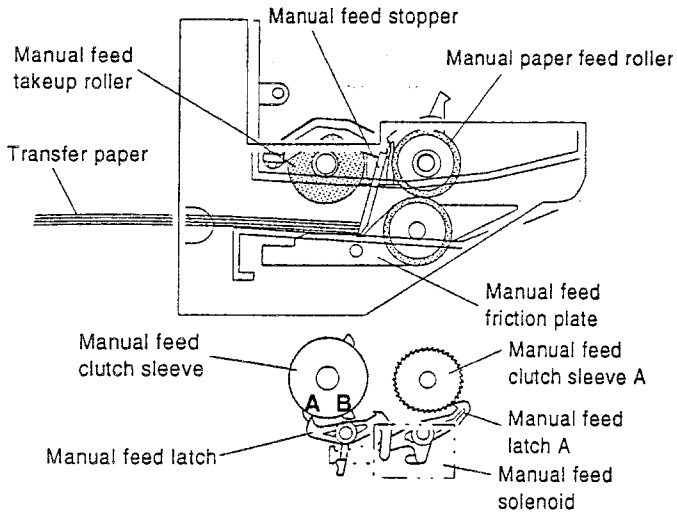


No.	Name	
①	Resist roller	Synchronizes the copy paper with image by controlling the resist roller clutch (RRC).
②	(PPD2) Paper transport sensor	For control of the paper transport roller clutch (TRC).
③	(LUD2) Lift upper limit sensor	For control of the upper cassette liftup motor; a high on this line stops the motor.
④	(PED2) Paper presence sensor	For detection of paper in the upper cassette; a low on this line shows that paper is present.
⑤	Takeup roller	The upper cassette paper takeup roller descends at the moment the paper feed solenoid turns on.
⑥	(LUD3) Lift upper limit sensor	For control of the lower cassette liftup motor; a high on this line stops the motor.
⑦	(PED3) Paper presence sensor	For detection of paper in the lower cassette; a low on this line shows that paper is present.
⑧	Takeup roller	The lower cassette paper takeup roller descends at the moment the paper feed solenoid turns on.
⑨	Counter paper feed roller	For prevention of double feed paper using the lower paper reversion roller.
⑩	Paper feed roller	Lower cassette paper feed roller with an internal one-way clutch.
⑪	(PID) Paper entry sensor	Entry of paper from the lower cassette is sensed to turn off the paper feed solenoid.
⑫	Paper transport roller	For transport of paper from the lower paper cassette.
⑬	Paper reversion roller	For prevention of double feed paper using the upper paper reversion roller.
⑭	Paper feed roller	Upper cassette paper feed roller with an internal one-way clutch.
⑮	Paper transport roller	Paper from the cassette is transported to the resist roller.
⑯	(TFD) Full waste toner sensor	A low on this line shows the full toner condition.
⑰	(PED1) Paper presence sensor	For detection of manual feed paper; a low on this line shows the paper is present.
⑱	Takeup roller	Manual feed paper takeup roller
⑲	Paper feed roller	Manual paper feed roller with one-way clutch
⑳	Paper reversion roller	For prevention of double feed paper using the lower paper reversion roller.
㉑	(PPD1) Paper transport sensor	For detection of paper from cassette and manual paper feed.

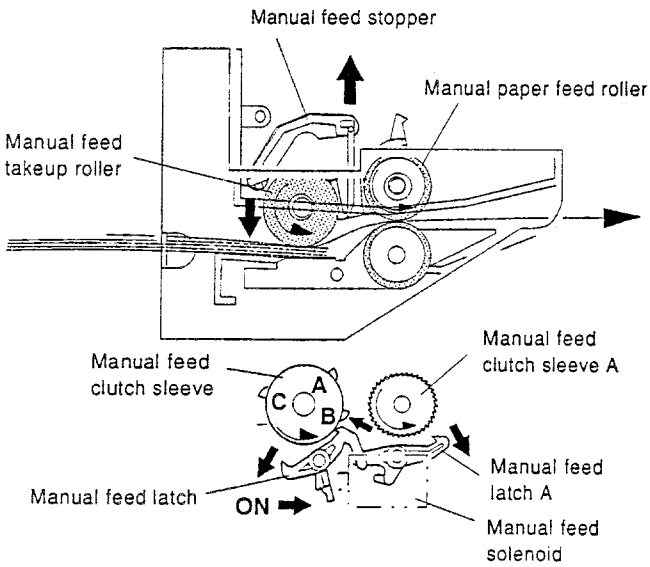
3. Basic operation

(1) Manual paper feed operation

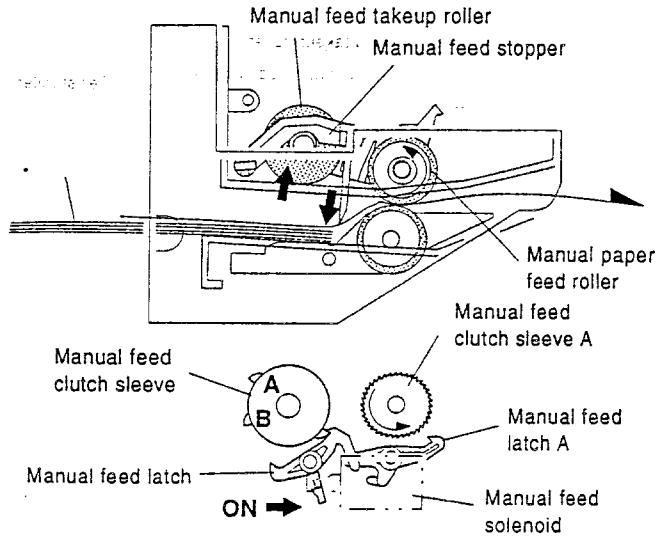
① When the manual feed is at rest, the manual paper feed solenoid (MPFS) is off and the manual feed stopper is closed with the takeup roller in the up position. Latches and clutches are in the position shown in the figure below.



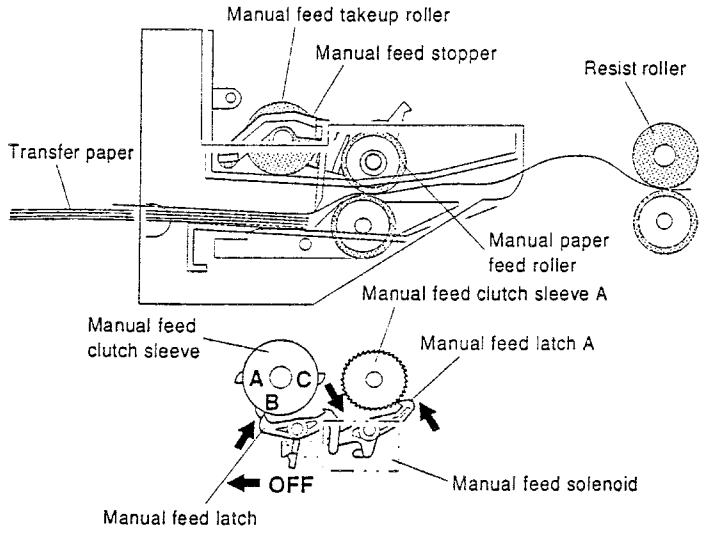
② When the PRINT switch is pressed, the manual paper feed solenoid (MPFS) turns active, the manual feed latch A disengages from the manual feed clutch sleeve A, and the manual feed roller and the manual feed takeup roller start rotating. In this moment, the manual feed stopper opens and the manual feed takeup roller comes in close contact with the copy paper to start paper feed.



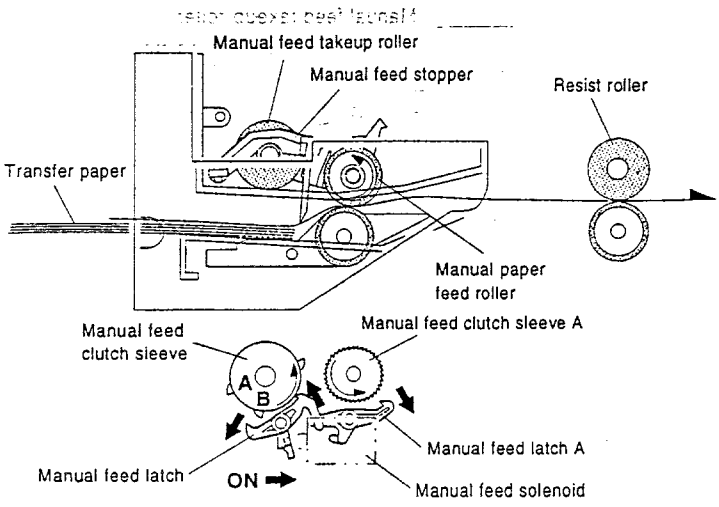
③ When the pawl C of the manual feed clutch sleeve B7 is caught by the manual feed latch B7, the manual feed stopper goes down and the manual feed takeup roller goes up. At this moment, the transport roller is rotating.



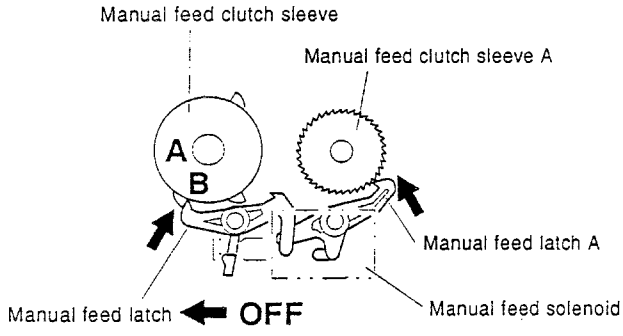
④ After the lead edge of the copy paper is detected by PPD2, the manual feed solenoid turns off after 0.2 second. Here, the pawl B of the clutch sleeve B7 is caught by the manual feed latch B7. This produces a buckle in the paper between the resist roller and the paper feed roller.

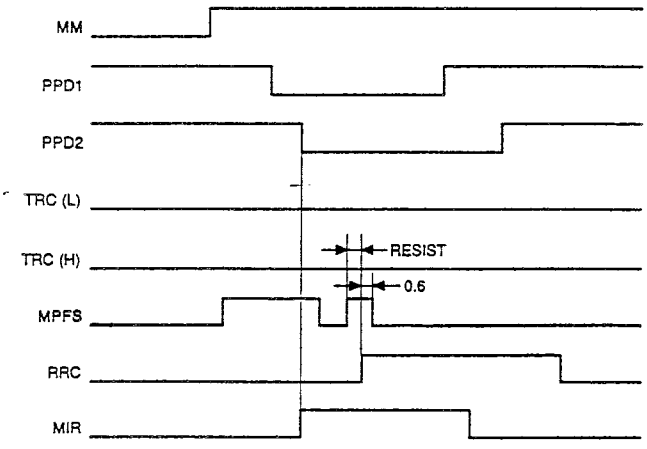


⑤ In synchronization with rotation of the resist roller, the manual feed solenoid turns on for 0.08 seconds and the manual paper feed roller rotates. A misfeed caused by a lack of seizure of the resist roller is prevented. Here, the manual takeup roller is up.



⑥ The manual feed solenoid turns off, the pawl A of the manual feed clutch sleeve B7 is caught by the manual feed latch B7, the manual feed operation terminates. The copy paper is then sent to the transfer unit by way of the resist roller.





(2) Cassette paper feed operation

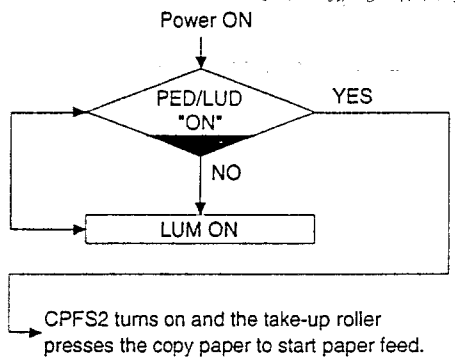
For the upper, lower, and desk cassettes, paper is fed in the same manner.

The operations of the lower cassette are described below.

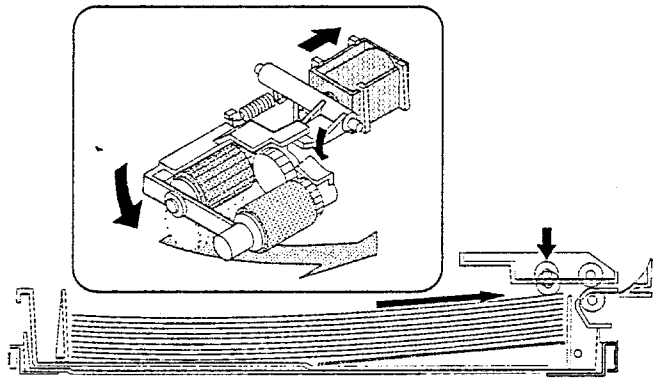
① Liftup action

When the power is turned on to the copier, the main circuit initiates to check every sensor.

The liftup motor is turn on or off according to the state of the paper presence sensor (PED) and the liftup sensor, and it becomes ready to feed paper.



CPFS2 turns on and the take-up roller presses the copy paper to start paper feed.



② Paper feed operation

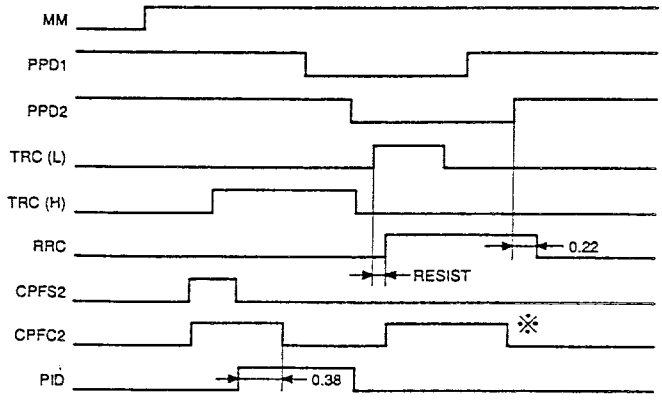
When the PRINT switch is pressed, the cassette paper feed solenoid (CPFS2) and the cassette paper feed clutch (CPFC2) turn on. As the solenoid turns on, the paper takeup roller is forced down to make contact with paper.

As the clutch turns on, the paper feed roller and the takeup roller start to rotate to pick up paper.

The paper picked up passes over the paper entry sensor (PID) and sent to the paper transport roller area.

The paper transport roller is driven with two kinds of clutches. Paper transport from the paper feed block to the resist roller is performed with the high speed clutch.

The paper obstructed by the resist roller synchronizes with the optical unit and transported to the process unit. For the paper is transported at the same speed as the process unit rotation, the drive changes from the high speed clutch to the low speed clutch.



Lower cassette paper feed timing chart

※ 500 ms ON when A3 (11"x17") paper feeding with the lower cassette.

[8] TRANSPORT/FUSING SECTION

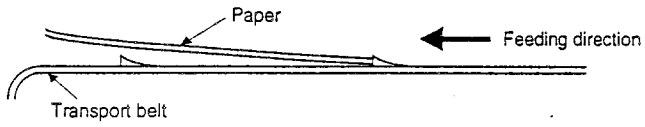
1. General

The SF-2022/2027 allows transport of paper of max. A3 (11" x 17") and min. A5 (8 1/2" x 5 1/2").
After images are transferred on the paper, the paper is separated from the drum and transported to the fuser section by rotations of the resist roller and the transport belt.
The paper separation sensor (PSD) is provided at the transport section. This sensor (PSD) is used to sense paper separation and for drive timing of the duplex gate solenoid (DGS) after fusing.

2. Basic composition and functions

(1) Transport section

① Transport belts (2pcs)
The transport belts are provided with notches to hold paper rear ends.



② Separation sensor (PSD)
This is a transmission type sensor, and attached to the main body chassis.

③ Suction fan motor and ozone filer
Ozone generated in the process high voltage section is absorbed through the filter.

(2) Fusing section

① Upper heat roller
The upper heat roller is teflon-coated. (Reversed crown shape)

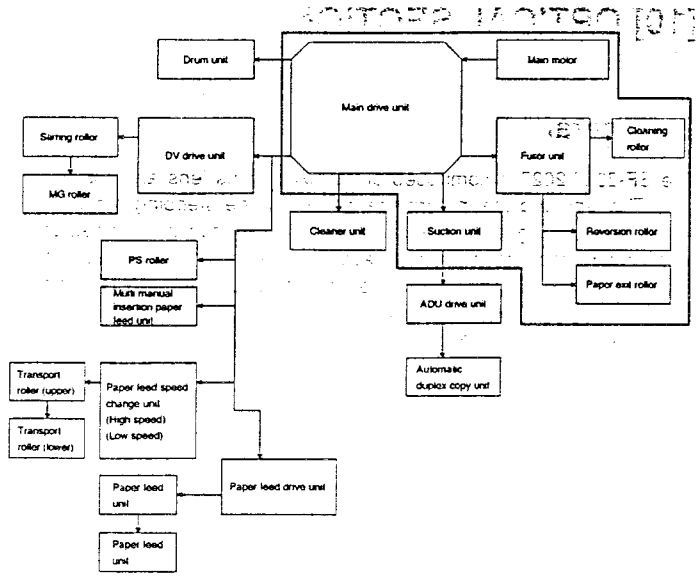
② Lower heat roller
A silicone rubber roller is used. (Crown shape)

③ Upper cleaning roller
The upper cleaning roller is impregnated with silicone oil to remove dirt on it and to provide better separation effect, lengthening the heat roller lifetime.

④ Separation pawl
The upper heat roller is equipped with four pawls which are teflon coated to reduce friction.
the lower heat roller is equipped with two pawls.

⑤ Upper/lower separation function
The upper and lower heat roller sections are separated by rotating operations with the transport roller as a fulcrum, providing better serviceability.

⑥ Drive system division
The fuser unit is rotated by the main drive unit. In case of manual rotation of the fuser unit to remove paper jam, however, excessive loads may be applied to the gears. To prevent against this, the spring clutch is provided in the main drive gears.



[9] HIGH VOLTAGE SECTION

1. General

There are three kinds of coronas; the main corona, the transfer corona, and the separation corona. The main corona employs the scorotron system, where the drum surface is evenly charged with negative charges controlled by the screen grid between the corona and the drum. The transfer corona is used to transfer toner images on the drum to the copy paper. A high, negative voltage is applied to the rear side of the paper. The separation corona applies AC corona to the copy paper to eliminate potential difference with the drum to allow separation of the paper.

2. Basic composition

(1) Main (charging) corona – High voltage transformer (MHVG)

–700µA (Electrode sheet front-rear balance difference: max. 8µA)

	Grid voltage	Developing bias voltage
Standard mode	–730V	–215V
Photo mode	–450V	
TSM mode	–610V	

(2) Transfer corona – High voltage transformer (THVG)

–31µA (Electrode sheet front-rear balance difference: max. 8µA)

(3) Separation corona – High voltage transformer (SHVG)

AC4KV ±0.1KV

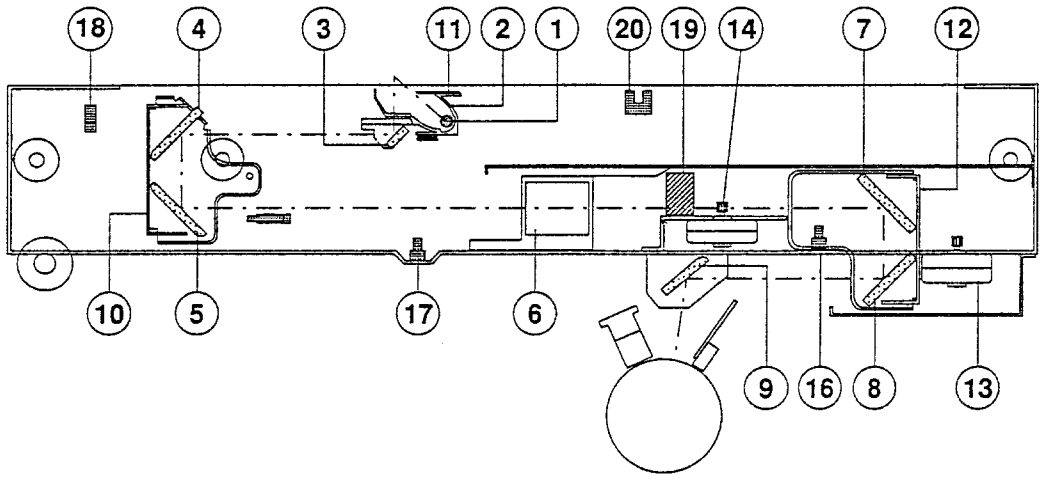
[10] OPTICAL SECTION

1. General

The SF-2022/2027 is composed of the fixed focus lens and six mirrors. The lens and the mirrors are moved by the stepping motor to positions according to the magnification ratio of reduction, normal, or enlargement copy. magnification ratio is changed from 0.5 to 2.0 in 151 steps by 1%. The six mirrors realizes a compact design. The slit exposure system with the moving light source is employed. Copy image density can be controlled by changing light quantity of the copy lamp.

The automatic exposure sensor is provided to sense density of the original and the copy lamp light quantity is controlled by the main circuit to provide even copy image.

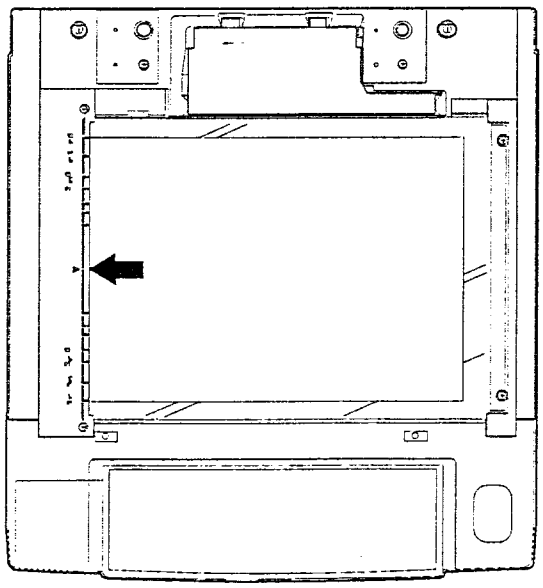
2. Basic composition



①	Copy lamp	②	Reflector	③	No. 1 mirror
④	No. 2 mirror	⑤	No. 3 mirror	⑥	Lens
⑦	No. 4 mirror	⑧	No. 5 mirror	⑨	No. 6 mirror
⑩	Mirror base B unit	⑪	Copy lamp unit	⑫	Mirror base C unit
⑬	Lens drive motor	⑭	No. 4, No. 5 mirror base drive motor	⑮	Mirror motor
⑯	Mirror base home position sensor	⑰	Lens home position sensor	⑱	Mirror home position sensor
⑲	Automatic exposure sensor	⑳	OC switch		

(1) Original table

The original table is fixed, and an original is set to the left center.



(2) Copy lamp

100V system 85V 275W
200V system 170V 310W

(3) Mirror

Six mirrors are used.
No. 1 mirror is attached to copy lamp unit, No. 2 and No. 3 mirrors to mirror base B, No. 4 and No. 5 mirrors to mirror base C.
Mirror bases A and B are scanned when copying. Mirror base C is used to change the distance between an original and the photoconductor in reduction or enlargement copy.

(4) Lens (Fixed focus lens)

- Construction: 1 group 3 lenses
- Brightness: F8.5
- Focal distance: 195mm ±1%

(5) Lens home position sensor (LHPS)

This sensor is used to sense lens position. The output signal of this sensor serves as the basic signal to control the copy magnification ratio.

(6) No. 4, No. 5 mirror base home position sensor (MBHPS)

This sensor is used to sense mirror base C (No. 4, No. 5 mirrors). The output of this sensor serves as the basic signal to control the copy magnification ratio.

(7) Lens base

The lenses are mounted to this base, which is moved in the paper feed direction for reduction copy and in the paper exit direction for enlargement copy.

(8) Lens slide shaft

This shaft is used to control optical axis of the lenses in reduction or enlargement copy. The lenses follow on the slide base shaft.

(9) Lens drive wire

The lens drive wire is used to move the lens base.

(10) Mirror base C

No. 4 and No. 5 mirrors are attached to mirror base C. Mirror base C is moved by the mirror base drive motor to adjust the distance between an original and the photoconductor in reduction or enlargement copy.

(11) Mirror base C (No. 4, No. 5 mirrors) drive wire

This wire is used to move mirror base C (No. 4, No. 5 mirrors).

(12) Mirror motor

The mirror motor is a DC servo motor used to move mirror base A and mirror base B. Its rotation is adjusted according to each magnification ratio.

(13) Mirror home position sensor (MHPS)

This is a transmission type sensor used to sense the home position of mirror base A.

(14) Mirror base B

No. 2 and No. 3 mirrors ar attache to mirror base B, which is scanned by the mirror motor.

(15) Copy lamp unit

This is composed of No. 1 mirror, the thermal fuse, the copy lamp, the exposure adjusting plate, and the reflector, and is scanned by the mirror motor.

(16) Thermal fuse

The thermal fuse is provided at the reflector to prevent against abnormal temperature rise in the optical system. In case of an abnormal temperature rise, it turns off the power source of the copy lamp.
100V system 109 °C
200V system 109 °C

(17) Reflector

Light from the copy lamp is reflected by the reflector onto an original.

(18) Exposure adjusting plate

There are three exposure adjusting plates attached to mirror base A to adjust exposure balance between the front and the rear sides.

(19) Mirror base drive wire

The mirror motor power is transmitted to mirror base A and mirror base B to scan the mirror base by means of this wire.

(20) Mirror base (No. 4, No. 5) drive motor

This is a stepping motor used to drive mirror base C.

(21) Lens drive motor

This is a stepping motor used to change lens positions.

(22) AE sensor

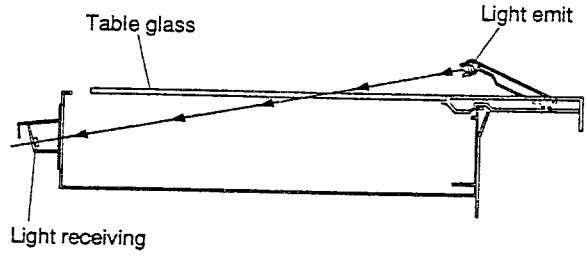
The AE sensor senses the original density by the magnitude of light reflected from the original. The center area of about 100mm wide in the mirror base scan direction is the light measuring area.
The elements are photo diodes.

(23) Blank lamp operation

When a reduction image is copied on a large size paper in reduction copy, the outside area becomes black background.
In another copy mode also, electric charges are remained on the outer area of the original image and toner is attracted to the area. To discharge this, light is radiated on the drum by the blank lamp to prevent against adhesion of toner in the outer area of the image.
The lead edge void is formed by the drum discharge system with the blank lamp light. The void width can be adjusted by the diagnostic function.

(24) Original size detection

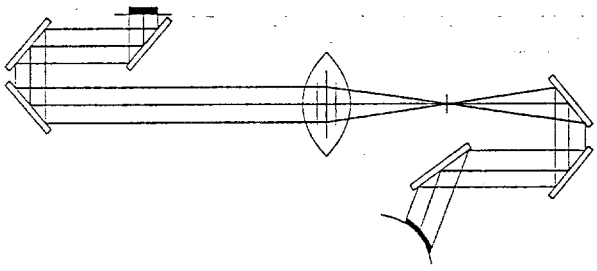
The original interruption system is employed, where light is passed from LED in the rear frame side through the table glass to the original to sense the original size.



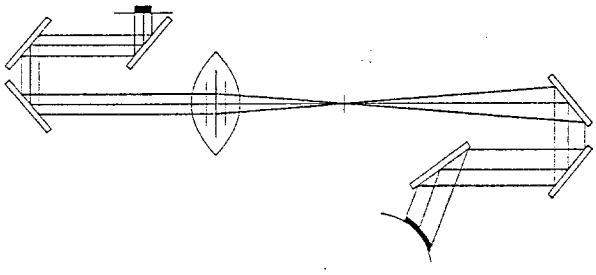
3. Basic operation

(Relation between an original, the lenses, and images in each magnification ratio)

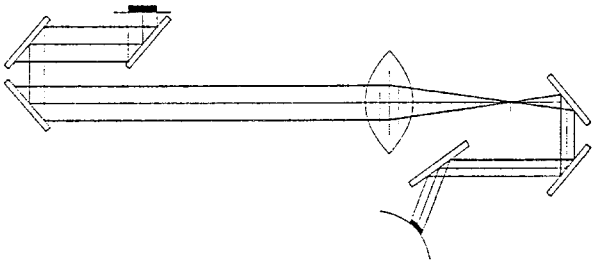
Normal copy: The distance between the original surface set on the table glass and the lens is adjusted to the distance between the lens and the exposure surface of the photoconductor to make a normal copy.

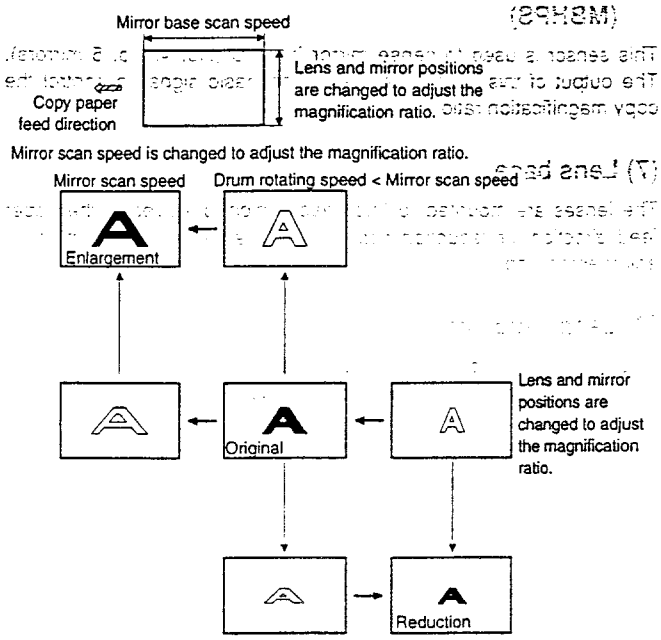


Enlargement: The lens approaches nearer the original compared from the normal copy and the distance between the original surface and the lens is shortened.
No. 4 and No. 5 mirrors go far from the lens and the distance between the lens and the exposure surface of the photoconductor becomes greater.
The distance between the original and the exposure surface of the photoconductor becomes greater than in the normal copy.



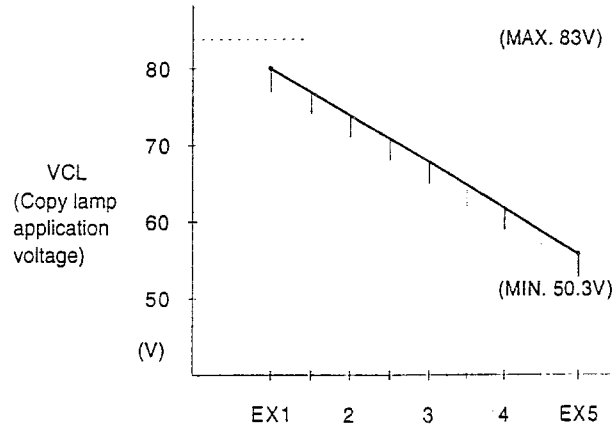
Reduction: The lens approaches nearer the photoconductor compared from the normal copy, and the distance between the original surface and the lens becomes greater.
The distance between the lens and the exposure surface of the photoconductor becomes shorter.
No. 4, 5 mirror and the mirror base go far from the lens.
The distance between the original and the exposure surface of the photoconductor becomes greater than in normal copy.




Mirror base scan speed
Copy paper feed direction
Lens and mirror positions are changed to adjust the magnification ratio.
Mirror scan speed is changed to adjust the magnification ratio.
Mirror scan speed
Drum rotating speed < Mirror scan speed
Enlargement
Original
Reduction
Lens and mirror positions are changed to adjust the magnification ratio.

(Copy lamp control for each copy density mode)

- Manual density copy mode



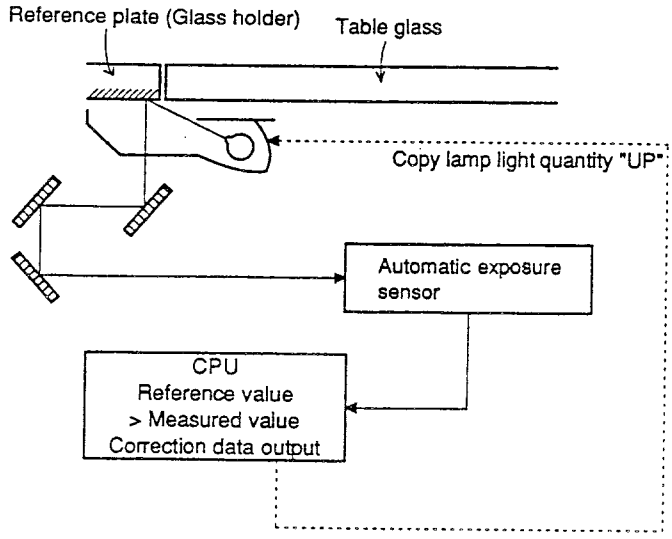
Perform simulation 46-01 to determine the copy lamp application voltages (Vcl) in EX1 and EX5.
When the copy lamp application voltages in EX1.0 and EX5.0 are determined, the voltage difference between them is divided into nine.
The application voltage of the copy lamp at each exposure level is determined by changing ON time duty of the copy lamp ON control signal.

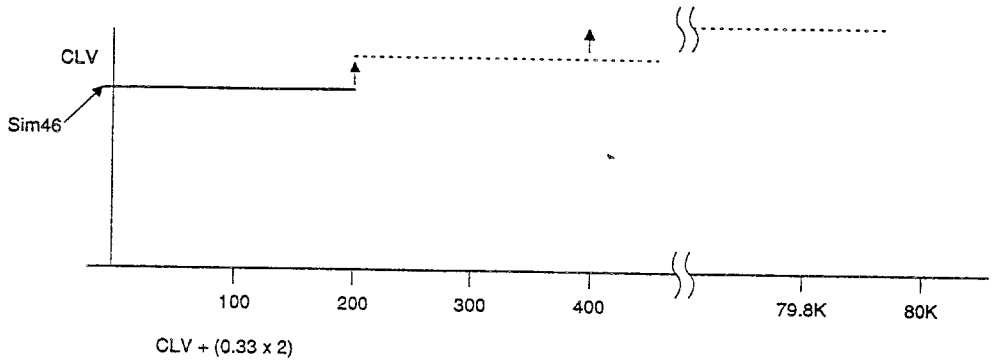
- Photo density copy mode

The control method is same as in the manual density copy mode. The image density is controlled by decreasing the grid bias voltage of the charging corona. To reproduce half tone image, however. ON time duty of the copy lamp ON signal is made shorter than in the manual density copy mode. (The application voltage is reduced.)

4. Optical system dirt correction

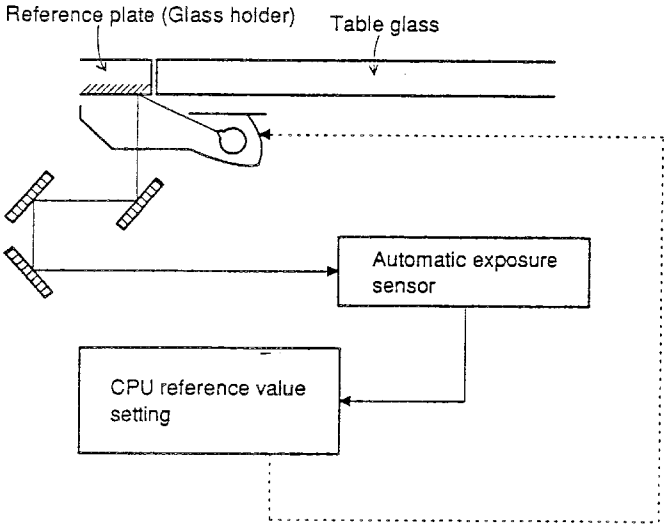
In the SF-2022/2027, exposure density is corrected by changing the copy lamp light quantity depending on dirt in the optical system (the copy lamp unit, No. 1 mirror, No. 2 mirror, No. 3 mirror).
The optical system dirt correction is performed as follows:





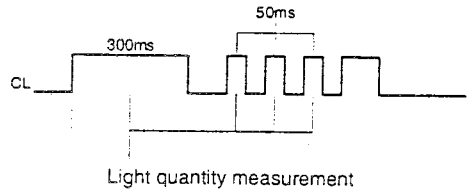
(1) Setting the reference value for optical system correction.

① Clean the optical system at every maintenance.



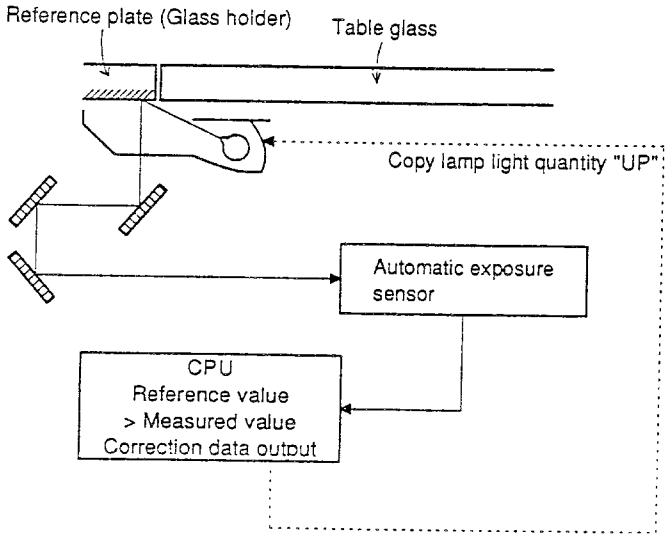
② Perform Simulation 46-1.
(The previous data are cleared.)

③ After completion of Simulation 46-1, when performing the first mirror initialization, measure light quantity of the copy lamp.



Obtain the average value from the four measurement values and use the average value as the reference value for correction.

(2) Dirt correction



① Measure light quantity when performing mirror initialization.
If, however, the number in the digit of 100 is an odd number, only set the flags in the register inside the CPU and do not perform correction.
If the number in the digit of 100 is an even number and the flag in the register inside the CPU is set, perform light correction.

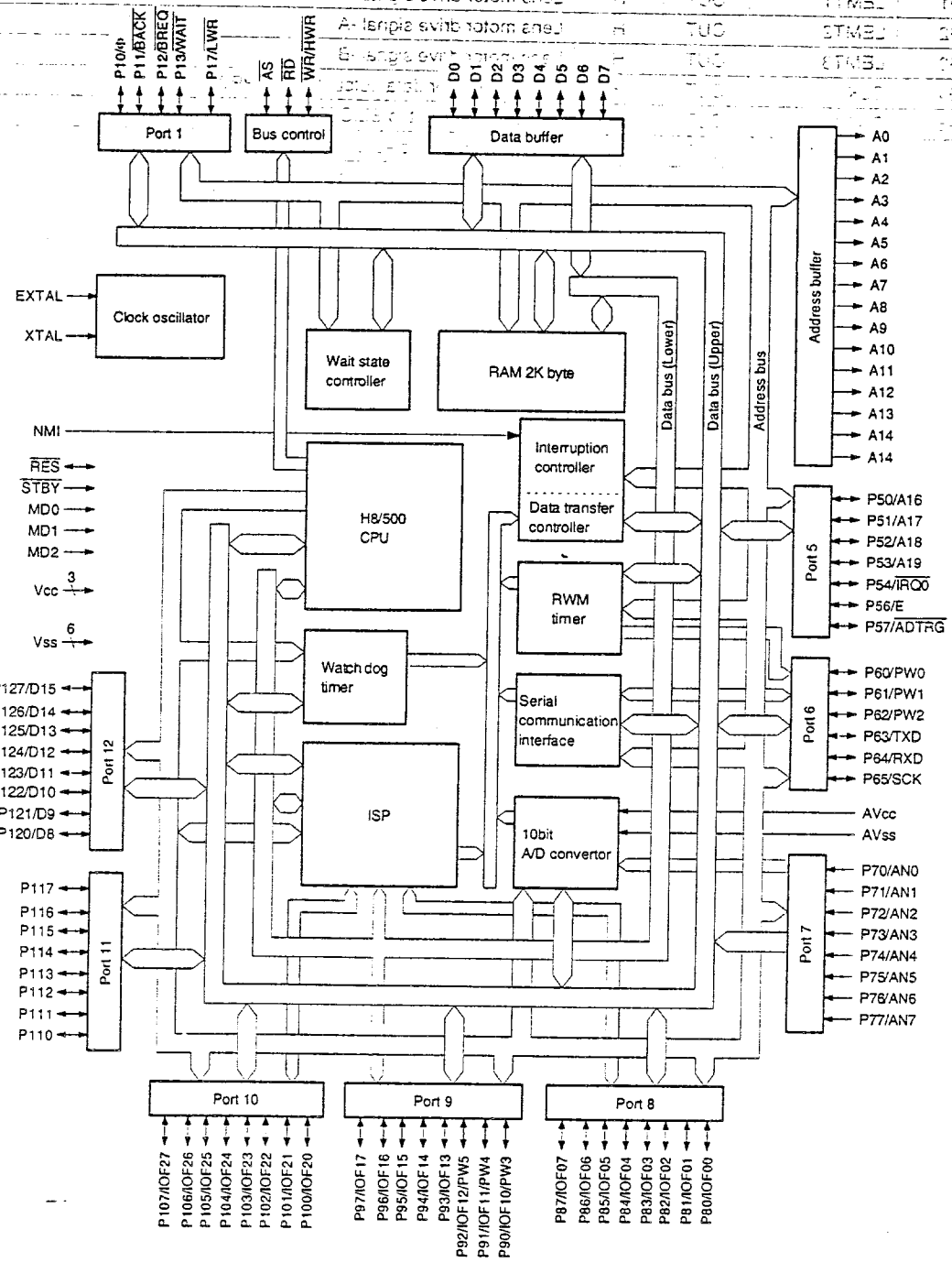
② Store the correction data into memory.

③ Reset the register inside the CPU.

4. Optical system and connection

In the SP-10S2/20S7 exposure lamp is corrected by changing the copy lamp light quantity depending on dirt in the optical system. The copy lamp unit, No. 1 mirror, No. 2 mirror, No. 3 mirror.
The optical system and connection is performed as follows:

④ Internal block diagram



⑤ CPU (IC113) pin signal

Pin No.	Port	Signal name	I/O	H/L	Specifications
1	P90	LEMT0	OUT	H	Lens motor drive signal A
2	P91	LEMT1	OUT	H	Lens motor drive signal B
3	P92	LEMT2	OUT	H	Lens motor drive signal -A
4	P93	LEMT3	OUT	H	Lens motor drive signal -B
5	P94	CLK	OUT	H	Clock signal for data output to BL.OPPWB
6	P95	DATA	OUT	H	Serial data output to BL.OPPWB
7	P96	BSPWM	OUT	H	High voltage unit bias level control pulse
8	P97	CLPWM	OUT	H	Copy lamp light quantity control pulse
9	VCC	+5V2			Power source (5V)
10	P100	FWS	IN	H	Power frequency detection signal (AC waveform zero cross timing)
11	P101	KEY	IN	H	Operation PWB key input signal (Serial data)
12	P102	NC			
13	P103	RE	IN	H	Pulse signal generated by mirror motor rotation
14	P104	$\overline{\text{MHPS}}$	IN	L	Optical unit home position sense signal
15	P105	NC			
16	P106	$\overline{\text{R-TXD}}$	OUT	L	Serial data output to RIC (Not used)
17	P107	$\overline{\text{R-RXD}}$	IN	L	Serial data input from RIC (Not used)
18	P80	PAM1-0	OUT	H	ADU side plate motor drive signal A
19	P81	PAM1-1	OUT	H	ADU side plate motor drive signal B
20	P82	PAM1-2	OUT	H	ADU side plate motor drive signal -A
21	P83	PAM1-3	OUT	H	ADU side plate motor drive signal -B
22	P84	MBMT0	OUT	H	Mirror base motor drive signal A
23	P85	MBMT1	OUT	H	Mirror base motor drive signal B
24	P86	MBMT2	OUT	H	Mirror base motor drive signal -A
25	P87	MBMT3	OUT	H	Mirror base motor drive signal -B
26	VSS	GND			Power source (GND)
27	P120	PAM2-0	OUT	H	ADU rear plate motor drive signal A
28	P121	PAM2-1	OUT	H	ADU rear plate motor drive signal B
29	P122	PAM2-2	OUT	H	ADU rear plate motor drive signal -A
30	P123	PAM2-3	OUT	H	ADU rear plate motor drive signal -B
31	P124	RRC	OUT	H	Resist roller clutch drive signal
32	P125	DCH	OUT	H	CPU reset signal
33	P126	TRCL	OUT	H	Transport roller clutch (low speed)
34	P127	TRCH	OUT	H	Transport roller clutch (high speed)
35	VSS	GND			Power source (GND)
36	D0	D0			Data signal
37	D1	D1			Data signal
38	D2	D2			Data signal
39	D3	D3			Data signal
40	D4	D4			Data signal
41	D5	D5			Data signal
42	D6	D6			Data signal
43	D7	D7			Data signal
44	VCC	+5V2			Power source (GND)
45	A0	A0			Address signal
46	A1	A1			Address signal
47	A2	A2			Address signal
48	A3	A3			Address signal
49	A4	A4			Address signal
50	A5	A5			Address signal
51	A6	A6			Address signal
52	A7	A7			Address signal
53	VSS	GND			Power source (GND)
54	A8	A8			Address signal
55	A9	A9			Address signal
56	A10	A10			Address signal

Pin No.	Port	Signal name	I/O	H/L	Specifications
57	A11	A11			Address signal
58	A12	A12			Address signal
59	A13	A13			Address signal
60	A14	A14			Address signal
61	A15	A15			Address signal
62	A16	A16			Address signal
63	A17	A17			Address signal
64	A18	A18			Address signal
65	A19	A19			Address signal (Not used)
66	P13	R-DSR	IN		Data set ready signal from RIC
67	P12	$\overline{\text{APHPS2}}$	IN	L	ADU rear plate sense (L at HP) (Sensor pin, H at HP)
68	P11	$\overline{\text{APHPS1}}$	IN	L	ADU width sense (L at HP) (Sensor pin, H at HP)
69	P10	80	IN		Short signal for Simulation 80 input (Not used)
70	$\overline{\text{RES}}$	$\overline{\text{RESET}}$	IN	L	Reset state at LOW (0V).
71	NMI	POFA	IN	H	Low with stable power voltage.
72	VSS	GND			Power source (GND)
73	EXTAL	EXTAL	IN		Clock (8MHz)
74	XTAL	XTAL	IN		Clock (8MHz)
75	VCC	+5V2			Power source (5V)
76	$\overline{\text{AS}}$	NC			
77	$\overline{\text{RD}}$	$\overline{\text{RD}}$	OUT	L	ROM, RAM, I/O data read signal
78	$\overline{\text{WR}}$	$\overline{\text{WR}}$	OUT	L	ROM. RAM, I/O data write signal
79	P17	U2	IN		U2 trouble cancel short signal (Not used)
80	MD0	GND	IN	L	Operation mode, control signal
81	MD1	+5V2	IN	H	Operation mode, control signal
82	MD2	+5V2	IN	H	Operation mode, control signal
83	$\overline{\text{STBY}}$	+5V2	IN	H	Hardware standby mode signal
84	AVCC	AVCC			A/D convertor reference voltage pin
85	AN0	AES	IN		Analog input signal (AE sensor)
86	AN1	TH	IN		Analog input signal (Thermistor)
87	AN2	PWS	IN		Analog input signal (Manual feed paper width sense: not used)
88	AN3	TCSA	IN		Analog input signal (Toner concentration sensor)
89	AN4	PD	IN		Analog input signal
90	AN5	PC	IN		Analog input signal
91	AN6	PLS	IN		Analog input signal (Manual feed paper length sense: Not used)
92	AN7	AN7	IN		Analog input signal
93	AVSS	GND			A/D convertor ground pin
94	VSS	GND			Power source (GND)
95	P57	$\overline{\text{SMDIR}}$	OUT	L	Mirror motor feed return select signal
96	P56	NC			
97	P54	NC			
98	P60	SMPWM	OUT	H	Mirror motor speed control pulse
99	P61	$\overline{\text{MBHPS}}$	IN	L	No. 4/5 mirror home position sense signal (L at HP)
100	P62	$\overline{\text{LHPS}}$	IN	L	Lens home position sense signal (L at HP)
101	P63	$\overline{\text{TXD}}$	OUT	L	Serial data output to each slave CPU
102	P64	$\overline{\text{RXD}}$	IN	L	Serial data input from each slave CPU
103	P65	NC			
104	VSS	GND			Power source (GND)
105	P110	$\overline{\text{PPD1}}$	IN	L	Paper transport sensor 1
106	P111	$\overline{\text{PPD2}}$	IN	L	Paper transport sensor 2
107	P112	$\overline{\text{IN2}}$	IN		Switch sense strobe signal
108	P113	$\overline{\text{IN3}}$	IN		Switch sense strobe signal
109	P114	$\overline{\text{IN4}}$	IN		Switch sense strobe signal
110	P115	$\overline{\text{IN5}}$	IN		Switch sense strobe signal
111	P116	$\overline{\text{IN6}}$	IN		Switch sense strobe signal
112	P117	$\overline{\text{IN7}}$	IN		Switch sense strobe signal

(3) I/O (IC114) TE7750

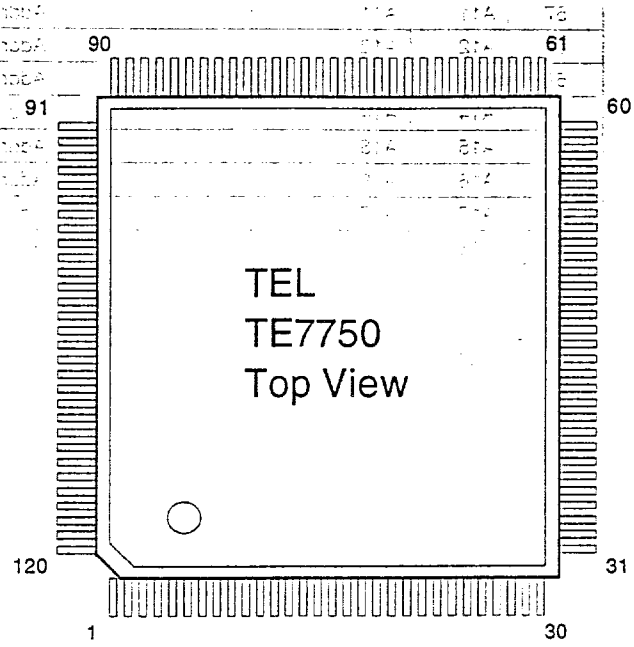
① General

The I/O converts output data of the CPU into the control signals.
The TE7750 is a versatile-use interface element.
Nine sets (8 bit) of I/O ports are provided to set I/O operations of parallel data by the program or the hardware.

② Features

8 bit parallel I/O ports (x 9 ports)

③ Pin arrangement



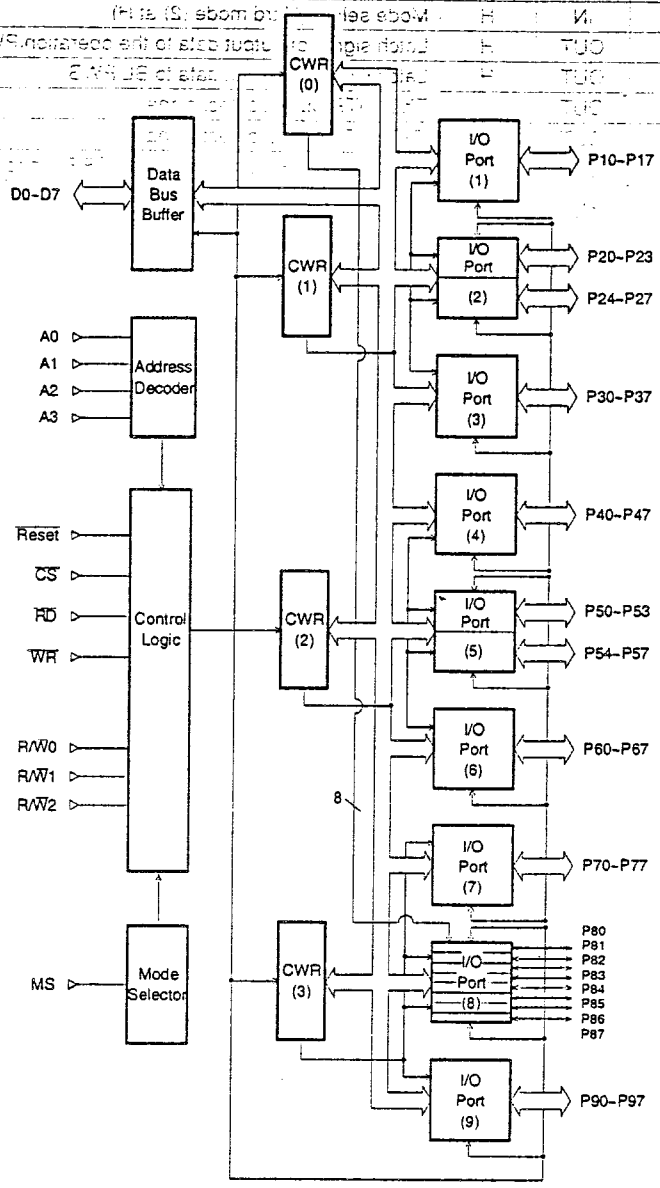
Pin	I/O	Pin name
1	—	VSS
2	—	NC
3	I	MS
4	I/O	P10
5	I/O	P11
6	I/O	P12
7	I/O	P13
8	I/O	P14
9	I/O	P15
10	I/O	P16
11	I/O	P17
12	I/O	P40
13	I/O	P41
14	—	VDD
15	—	VSS
16	I/O	P42
17	I/O	P43
18	I/O	P44
19	I/O	P45
20	I/O	P46
21	I/O	P47
22	I/O	P20
23	I/O	P21
24	I/O	P22
25	I/O	P23
26	I/O	P24
27	I/O	P25
28	—	NC
29	—	NC
30	—	NC

Pin	I/O	Pin name
31	—	VSS
32	—	NC
33	I/O	P26
34	I/O	P27
35	I/O	P50
36	I/O	P51
37	I/O	P52
38	I/O	P53
39	I/O	P54
40	I/O	P55
41	I/O	P56
42	I/O	P57
43	I/O	P30
44	—	VDD
45	—	VSS
46	I/O	P31
47	I/O	P32
48	I/O	P33
49	I/O	P34
50	I/O	P35
51	I/O	P36
52	I/O	P37
53	I/O	P70
54	I/O	P71
55	I/O	P72
56	I/O	P73
57	—	NC
58	—	NC
59	—	NC
60		P74

Pin	I/O	Pin name
61	—	VSS
62	—	NC
63	I/O	P75
64	I/O	P76
65	I/O	P77
66	I/O	P60
67	I/O	P61
68	I/O	P62
69	I/O	P63
70	I/O	P64
71	I/O	P65
72	I/O	P66
73	I/O	P67
74	—	VDD
75	—	VSS
76	I/O	P90
77	I/O	P91
78	I/O	P92
79	I/O	P93
80	I/O	P80
81	I/O	P81
82	I/O	P82
83	I/O	P83
84	I/O	P84
85	I/O	P85
86	I/O	P86
87	I/O	P87
88	—	NC
89	—	NC
90	—	NC

Pin	I/O	Pin name
91	—	VSS
92	—	NC
93	I/O	P94
94	I/O	P95
95	I/O	P96
96	I/O	P97
97	I	RW0
98	I	RW1
99	I	RW2
100	I/O	D0
101	I/O	D1
102	I/O	D2
103	I/O	D3
104	–	VDD
105	–	VSS
106	I/O	D4
107	I/O	D5
108	I/O	D6
109	I/O	D7
110	I	A0
111	I	A1
112	I	A2
113	I	A3
114	I	RD
115	I	WR
116	I	CS
117	—	NC
118	—	NC
119	—	NC
120	I	RESET

④ Internal block diagram



⑤ I/O (IC114) pin signal

Pin No.	Port	Signal name	I/O	H/L	Specifications
1	VSS	GND			Power source (GND)
2	NC				
3	MS	+5V2	IN	H	Mode select (Hard mode (2) at H)
4	P10	LATCH-OP	OUT	H	Latch signal of output data to the operation PWB
5	P11	LATCH-BL	OUT	H	Latch signal of output data to BL PWB
6	P12	ASEL0	OUT		TXD, DTR output select signal
7	P13	ASEL1	OUT		TXD, DTR output select signal
8	P14	BEO-OP	OUT	H	Operation PWB output driver ON/OFF control signal
9	P15	BEO-BL	OUT	H	BL PWB output driver ON/OFF control signal
10	P16	NC			
11	P17	NC			
12	P40	AEG0	OUT	H	AE GAIN select signal
13	P41	AEG1	OUT	H	AE GAIN select signal
14	VDD	+5V2			Power source (5V)
15	VSS	GND			Power source (GND)
16	P42	AEG2	OUT	H	AE GAIN select signal
17	P43	SRES	OUT	H	Slave PWB reset signal (Not used)
18	P44	TMa	OUT	H	Toner supply motor drive signal
19	P45	TMb	OUT	H	Toner supply motor drive signal
20	P46	NC			
21	P47	NC			
22	P20	DTR	OUT		Data transmit ready signal
23	P21	DPFC	OUT	H	Duplex tray paper feed clutch drive signal
24	P22	CLE	OUT	H	Copy lamp enable signal (ON at H)
25	P23	AUDCL	OUT	H	Auditor time-out clear
26	P24	AUDCP	OUT	H	Auditor during copy cycle
27	P25	PNC	OUT	H	Personal counter control signal
28	NC				
29	NC				
30	NC				
31	VSS	GND			Power source (GND)
32	NC				
33	P26	LED0	OUT	H	Original size sense LED lighting signal
34	P27	LED1	OUT	H	Original size sense LED lighting signal
35	P50	MHV	OUT	H	Main corona high voltage output control signal
36	P51	THV	OUT	H	Transfer corona high voltage output control signal
37	P52	SHV	OUT	H	Separation corona high voltage output control signal
38	P53	EX1	OUT	H	Reserved.
39	P54	GR SEL0	OUT	H	Grid bias control signal 0
40	P55	GR SEL1	OUT	H	Grid bias control signal 1
41	P56	DDC	OUT	H	Duplex drive connection clutch
42	P57	PR	OUT	H	Power relay control signal
43	P30	VFM1	OUT	H	Ventilation fan motor control signal 1
44	VDD	+5V2			Power source (5V)
45	VSS	GND			Power source (GND)
46	P31	VFM2	OUT	H	Ventilation fan motor control signal 2
47	P32	DRRC	OUT	H	Duplex reversion roller clutch
48	P33	MM	OUT	H	Main motor control signal
49	P34	SFM	OUT	H	Suction fan motor control signal
50	P35	MPFS	OUT	H	Manual paper feed solenoid control signal
51	P36	CPFS1	OUT	H	Upper cassette paper feed solenoid control signal
52	P37	CPFS2	OUT	H	Lower cassette paper feed solenoid control signal
53	NC				
54	P71	CPFC1	OUT	H	Upper cassette paper feed clutch control signal
55	P72	CPFC2	OUT	H	Lower cassette paper feed clutch control signal
56	P73	MMPR	OUT	H	Main motor power relay control signal
57	NC				
58	NC				
59	NC				
60	P74	HL	OUT	H	Heater lamp control signal
61	VSS	GND			Power source (GND)

Pin No.	Port	Signal name	I/O	H/L	Specifications
62	NC				
63	P75	LUM1	OUT	H	Lift up motor control signal (upper stage)
64	P76	LUM2	OUT	H	Lift up motor control signal (lower stage)
65	P77	PSPS	OUT	H	Paper separation solenoid control signal
66	P60	W0	OUT	H	Switch sense strobe signal
67	P61	W1	OUT	H	Switch sense strobe signal
68	P62	W2	OUT	H	Switch sense strobe signal
69	P63	W3	OUT	H	Switch sense strobe signal
70	P64	W4	OUT	H	Switch sense strobe signal
71	P65	W5	OUT	H	Switch sense strobe signal
72	P66	W6	OUT	H	Switch sense strobe signal
73	NC				
74	VDD	+5V2			Power source (5V)
75	VSS	GND			Power source (GND)
76	P90	DGS	OUT	H	Duplex gate solenoid control signal
77	P91	CFM	OUT	H	Cooling fan motor control signal
78	P92	SSEL	OUT		OP.BL select signal
79	NC				
80	P80	PLED	OUT	H	Process control LED (Not used)
81	P81	R-RTS	OUT		RTS for RIC (Not used)
82	P82	R-DTR	OUT		DTR for RIC (Not used)
83	P83	SME	OUT	L	Mirror motor enable signal (ON at L)
84	NC				
85	NC				
86	NC				
87	NC				
88	NC				
89	NC				
90	NC				
91	VSS	GND			Power source (GND)
92	NC				
93	P94	$\overline{\text{PDSEL0}}$	OUT	L	Original sense photo transistor select signal
94	P95	$\overline{\text{PDSEL1}}$	OUT	L	Original sense photo transistor select signal
95	P96	$\overline{\text{PDSEL2}}$	OUT	L	Original sense photo transistor select signal
96	P97	DL	OUT	H	Discharge lamp control signal
97	PW0	$\overline{\text{L(GND)}}$	IN	L	Read/write set signal
98	RW1	$\overline{\text{L(GND)}}$	IN	L	Read/write set signal
99	RW2	$\overline{\text{L(GND)}}$	IN	L	Read/write set signal
100	D0	D0	IN		Data signal
101	D1	D1	IN		Data signal
102	D2	D2	IN		Data signal
103	D3	D3	IN		Data signal
104	VDD	+5V2			Power source (5V)
105	VSS	GND			Power source (GND)
106	D4	D4	IN		Data signal
107	D5	D5	IN		Data signal
108	D6	D6	IN		Data signal
109	D7	D7	IN		Data signal
110	A0	A0	IN		Address signal
111	A1	A1	IN		Address signal
112	A2	A2	IN		Address signal
113	A3	A3	IN		Address signal
114	RD	$\overline{\text{RD}}$	IN	L	Data read signal
115	WR	$\overline{\text{WR}}$	IN	L	Data write signal
116	CS	$\overline{\text{I/O CS}}$	IN	L	Chip select signal
117	NC				
118	NC				
119	NC				
120	RESET	$\overline{\text{RESET}}$	IN	L	Reset signal. Reset to initial state at LOW level of initial setting pulse input pin.

(4) RAM (IC115) X28C64

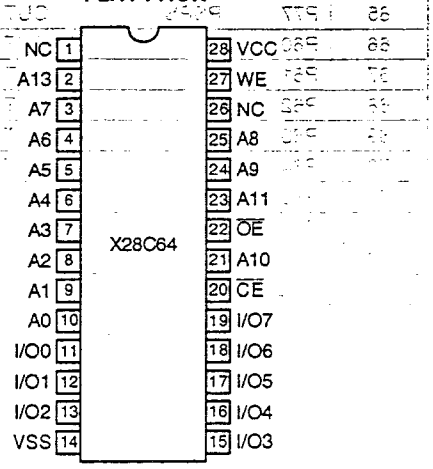
① General

The RAM stores various set data necessary for the SF-2022/2027 system operations and counter data such as paper jam causes or trouble codes (without batteries). After turning on/off the power, data are transmitted between the RAM and the main CPU.
The X28C64 is an 8KByte EEPROM (Electrically Erasable PROM) and operates on a single power of 5V.

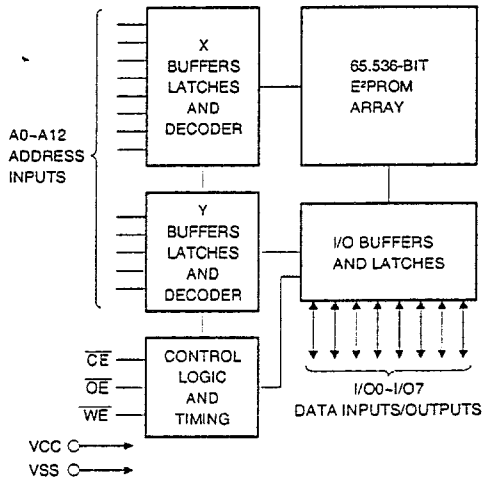
② Features

Low power CMOS operating current: Max. 60mA
All memory write time: Average 0.625sec

③ Pin arrangement



④ Internal block diagram



⑤ RAM (IC115) pin signal

Pin No.	IN/OUT	Signal name	Function
1	—	nc	
2	IN	A12	Address signal
3 ~ 10	IN	A7 ~ A0	Address signal
11 ~ 13	IN/OUT	I/O0 ~ I/O2	Data signal
14	—	GND	GND (0V)
15 ~ 19	IN/OUT	I/O3 ~ I/O7	Data signal
20	IN	$\overline{CS}$	RAM chip select signal. RAM is selected at LOW (0V).
21	IN	A10	Address signal
22	IN	$\overline{RD}$	Read signal. RAM data are read into CPU at LOW level.
23	IN	A11	Address signal
24	IN	A9	Address signal
25	IN	A8	Address signal
26	IN	NC	
27	IN	$\overline{WR}$	Write signal. Data are written from CPU to RAM at LOW level (0V).
28	—	5V	Power source

⑥ Backup data list

Item	Set program No.	Content
Counter	20-01	Maintenance preset counter setting
	20-02	Domestic mini maintenance setting for black copy kit
	20-03	Domestic mini maintenance setting for color copy kit
	—	Maintenance counter
	—	JAM memory (Max. 50 pcs.)
	—	Total JAM counter
	—	Total counter
	—	Mini maintenance counter (3 colors)
	—	Mini maintenance preset counter
	—	RADF (ADF) counter
	—	ADU counter
Simulation set value	25-02	Automatic developer adjustment value
	26-01	Option setting
	26-03	Counter mode setting/Timer automatic clear setting
	26-06	Destination setting
	26-07	Drum sensitivity setting
	26-08	Lens focus setting
	26-09	No. 4/5 mirror characteristics setting
	26-10	DPCM SEC mode setting
	41-02	Original size sensor adjustment
	43	Fusing temperature setting
	46-01	Exposure level adjustment
	46-02	Exposure adjustment (Formula)
	47	AE sensor characteristics measurement
	48-01	Front/rear magnification ratio adjustment
	48-02	Paper transport direction magnification ratio adjustment
	50-01	Lead edge image position adjustment
	50-02	Lead edge image position adjustment
	51-02	Resist quantity adjustment
	51-05	Frame erase adjustment
	52-01	ADU alignment plate adjustment value setting
	52-02	ADU rear plate adjustment value setting
	53-01	RADF stop position adjustment (normal paper, one side)
	53-02	RADF stop position adjustment (normal paper, both sides)
	53-03	RADF stop position adjustment (thin paper)
	53-04	RADF resist sensor adjustment
	53-05	RADF reverse sensor adjustment

(5) Decoder (IC139, IC138)

① General

IC139 and IC138 are two sets of independent binary-quaternary decoders.

IC139A:

Enable	Select		Output		
GND	A17	A18	ROMCS	$\overline{\text{I/OCS}}$	$\overline{\text{EEPROMCS}}$
L	L	L	L	H	H
L	H	L	H	L	H
L	L	H	H	H	L

Chip select signal is outputted with address data (A17, 18).

IC139B:

Enable	Select		Output			
$\overline{\text{DTR}}$	ASEL0	ASEL1	$\overline{\text{A-DTR}}$	$\overline{\text{D-DTR}}$	$\overline{\text{S-DTR}}$	$\overline{\text{O-DTR}}$
L	L	L	L	H	H	H
L	H	L	H	L	H	H
L	L	H	H	H	L	H
L	H	H	H	H	H	L

Data receive enable signal from the slave CPU is outputted by address selector (ASEL0, 1).

$\overline{\text{A-DTR}}$: Data send enable from RADF/ADF

$\overline{\text{D-DTR}}$: Data send enable from the desk unit

$\overline{\text{S-DTR}}$: Data send enable from the sorter unit

$\overline{\text{O-DTR}}$: Data send enable from the operation PWB unit

IC138A:

Enable	Select		Output	
$\overline{\text{CLK}}$	SSEL	GND	CLK-OP	CLK-BL
L	L	L	L	H
L	H	L	H	L

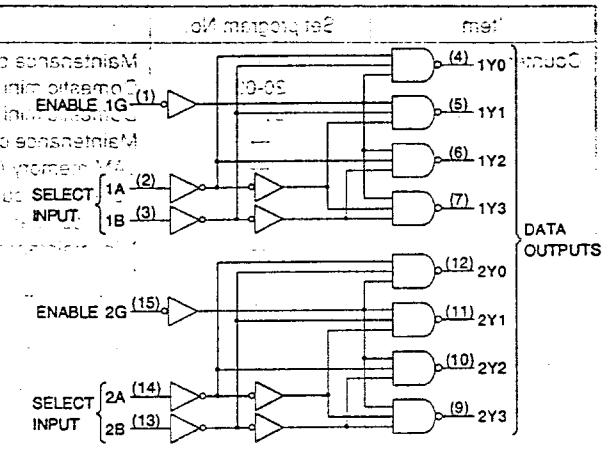
With select signal (SSEL), clock signal is outputted to the driver IC in the operation PWB and the blank lamp PWB.

IC138B:

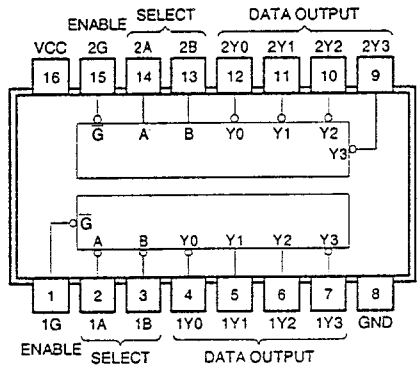
Enable	Select		Output			
$\overline{\text{TXD}}$	ASEL0	ASEL1	$\overline{\text{A-TXD}}$	$\overline{\text{D-TXD}}$	$\overline{\text{S-TXD}}$	$\overline{\text{O-TXD}}$
L	L	L	L	H	H	H
L	H	L	H	L	H	H
L	L	H	H	H	L	H
L	H	H	H	H	H	L

With address selector (ASEL0, 1), the destination of the CPU output data is selected and the data are outputted.

② Internal logic diagram



③ Pin connection


ENABLE
SELECT
DATA OUTPUT
VCC 2G 2A 2B 2Y0 2Y1 2Y2 2Y3
16 15 14 13 12 11 10 9
G A B Y0 Y1 Y2 Y3
G A B Y0 Y1 Y2 Y3
1 2 3 4 5 6 7 8
1G 1A 1B 1Y0 1Y1 1Y2 1Y3 GND
ENABLE
SELECT
DATA OUTPUT

④ Operations

When this is used as a decoder, if input 1A and 1B are specified with 2-bit binary codes, one of the outputs corresponding to the value becomes LOW and the other three outputs become HIGH. At that time, enable input E (15 pin, 1 pin) is kept at LOW. When E (15 pin, 1 pin) is HIGh, all outputs become HIGH regardless of DA and DB.

1G	1B	1A	1Y0	1Y1	1Y2	1Y3
H	X	X	H	H	H	H
L	L	L	L	H	H	H
L	H	L	H	H	L	H
L	H	H	H	H	H	L

Note 1: X: HIGH or LOW.

(6) Start/stop control circuit

① General

The circuit senses ON/OFF state of the power source to control start/stop of the circuits.
The DC power PWB supplies power voltages (VB=+24V, VC=+10V, VD1=5V, VD2=5V).
After the power voltage reaches the specified level, the circuit operation is started. Before the power voltage falls below the specified level, the circuit operation is stopped, preventing against malfunctions.

② Operation

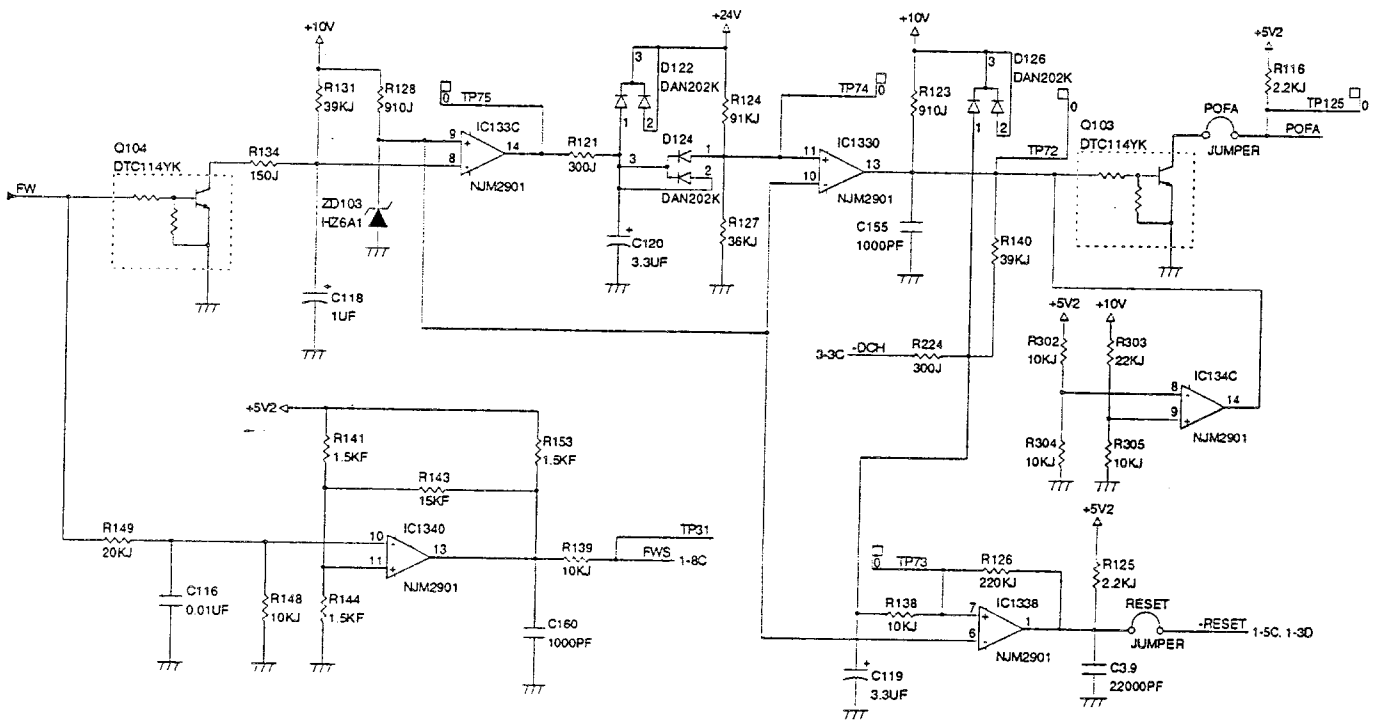
Ⓐ POFA generating circuit (Power voltage sense circuit)

This circuit senses ON/OFF of the power source and the power voltage. The DC power voltage is unstable immediately after turning on the power, or when the AC input voltage is abnormally low, or in the transition period after turning off the power.

When the DC voltage falls below the specified level, the circuits do not work properly. Especially when the power is turned on/off, data transmission is performed between the EEPROM (IC115) and the CPU (IC113). If, in this case, VD (+5V) power voltage if low, data transmission is not performed properly.

To protect against this malfunction, on/off of the power is sensed by this circuit and informed to the CPU so that the CPU starts data transmission with the RAM and the operations of each circuit and that it completes data transmission with the EEPROM and stops the operations of each circuit before the DC power voltage falls below the machine operation disable level. (Data transmission between the CPU and the EEPROM is allowed if only VD2 (+5V2) does not fall.)

Signal POFA is used to inform the CPU of on/off of the power and the DC power voltage state. POFA is driven HIGH to turn off the power when the DC power voltage becomes higher than the specified level. POFA is driven LOW just before the DC power voltage becomes low (0V).

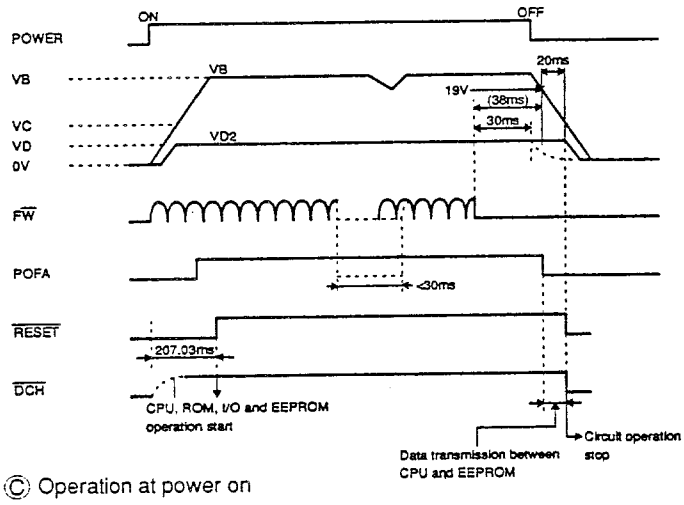


Ⓑ $\overline{\text{RESET}}$ generating circuit

$\overline{\text{RESET}}$ signal is formed with the power voltage sense signal (POFA) and the data transmission complete signal ($\overline{\text{DCH}}$) outputted from the CPU, and is used to operate each circuit in the stable range of the DC power voltage.

$\overline{\text{RESET}}$ signal is set (operation enabled) when POFA becomes HIGH (+5V), and is reset (operation stopped) when $\overline{\text{DCH}}$ becomes LOW (0V).

When POFA becomes LOW, data are transmitted from the CPU to the EEPROM. After completion of the data transmission, $\overline{\text{DCH}}$ becomes LOW.



Ⓒ Operation at power on

- When the power is turned on, FW rises to turn on the collector and the emitter of Q104 so that IC133 8 pin voltage becomes about 0.736V which is lower than 9 pin voltage (ZD103 5.2 ~ 5.5V). As a result, 14 pin is opened.
- 24V rises about 16msec after FW rising. C124 is charged through R124 and D124. IC133 5 pin voltage becomes higher than the reference voltage IC133 4 pin (ZD103 5.2 ~ 5.5V) in about 95msec so that 2 pin (POFA) becomes high.

Ⓓ Operation at power off

- When the power is turned off, FW falls to open the collector and the emitter of Q104. C118 is charged through R131. IC133 8 pin voltage becomes higher than 9 pin (ZD103 5.2 ~ 5.5V) in about 30msec. As a result, 14 pin becomes low.
- When IC133 14 pin becomes low, C120 is discharged and 5 pin voltage becomes about 0.8V which is lower than 4 pin (ZD103 5.2 ~ 5.5V). As a result, 2 pin (POFA) becomes low.

Ⓔ Operations at an instantaneous service interruption

Since POFA signal is outputted by IC133, it may erroneously outputted by discrepancy of resign times of 5V and 10V. To prevent against this, power voltages of 5V and 10V are monitored by R302, 303, 304, 305, and IC133.

- When the power is turned off, POFA should be driven low (0V) at the early stage. If it is driven low too early, however, the machine stops its operation even at an instantaneous service interruption (less than 30msec) which will not obstruct machine operation in normal cases. Therefore, off state of AC power for more than 30msec is judged as power OFF in this circuit and $\overline{\text{POFA}}$ is driven low.
- In normal operations, IC133 8 pin is at LOW level. At an instantaneous service interruption, FW becomes LOW to open the collector and the emitter of Q104, charging C118 through R131. So it takes more than 30msec for IC133 8 pin voltage to rise above the reference voltage (IC133 9 pin, 5.2V ~ 5.5V), and the machine does not stop at an instantaneous service interruption of 30msec or less.

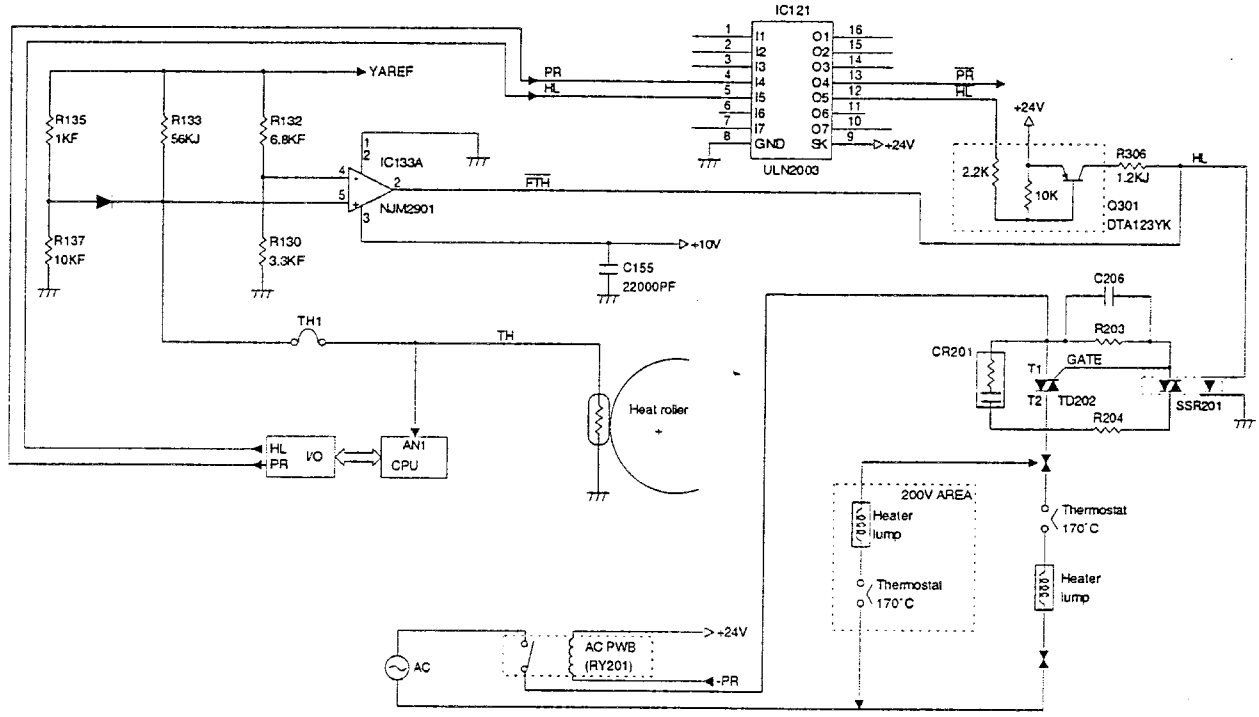
Ⓕ Operations when the power voltage falls

- When the AC power voltage falls below a certain level, the DC power voltage also falls though the DC power circuit is a regulator circuit.
  Therefore, 24V is monitored and when it falls to 19V, $\overline{\text{POFA}}$ is driven low (0V). (When it falls below 19V, IC133 5 pin voltage becomes lower than 4 pin reference voltage because of voltage division by R124 and R127. As a result, the output of comparator (IC133) becomes low.)

(7) Heater lamp control circuit

① General

The heater lamp control circuit detects the heat roller surface temperature with the thermistor, converts it into voltage level, and outputs it to the CPU analog input pin.
The CPU converts the analog voltage into digital signal level, compares it with the value set by test commands, turns on/off the heater lamp according to the level, and maintain the heat roller surface temperature at a constant level.
When a paper jam occurs in the SF-2022/2027, this control circuit operates for max. 3 min to shorten the jam recovery time (8 sec).



When the heat roller surface temperature is low, the thermistor resistance increases. When the surface temperature is high, the resistance decreases. The thermistor terminal voltage, therefore, increases when the heat roller surface temperature is low, and decreases when the temperature is high. The thermistor terminal voltage is inputted to the CPU analog port, and the CPU controls on/off of the heater lamp with the input voltage level.

[High temperature protecting circuit in wild run of the CPU]

The voltage at IC133 3 pin (reference voltage) is divided by R130 and R132, and the thermistor terminal voltage is applied to IC133 2 pin.
When 2 pin voltage is lower than 3 pin voltage (the heat roller surface temperature: about 230 degree C), output pin 1 becomes HIGH and IC133 2 pin becomes LOW. As a result, HL signal is pulled to the GND level and the heater lamp lighting signal is not generated. (IC133 output 2 pin is normally HIGH (Open state).)

[When the heat roller surface temperature is lower than the set temperature]

a. Since the thermistor pin voltage is higher than the set level, output signal HL from the CPU becomes HIGH.

b. HL signal is passed through IC121, TR, and Q301 to the solid state relay.
When, therefore, HL signal is LOW, the internal triac turns on.

c. When the internal traic turns on, a pulse is applied to the gate of the external triac to allow a current to flow from the power source through the heater lamp to the triac, thus lighting the heater lamp.

[When the heat roller surface temperature is higher than the set temperature]

a. Since the thermistor pin voltage is lower than the set level, output signal HL from the CPU becomes low.

b. HL becomes low, SSR is turned off, the external triac is turned off, and the heater lamp is turned off.

[Q301]

Q301 protects the heater lamp from lighting due to trouble in the harness of the heater lamp drive signal.

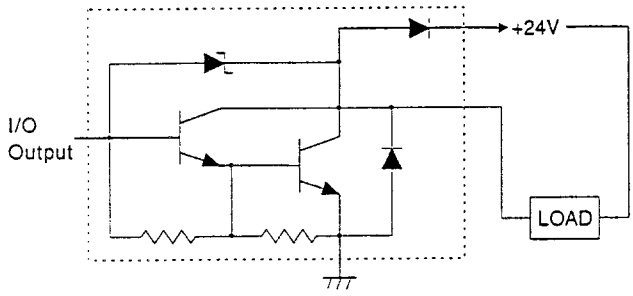
(8) Driver circuit (Solenoid, magnetic clutch)

① General

The control signals of each load outputted from the CPU and I/O cannot drive the load directly. The output, therefore, is delivered to the load through the driver IC.

② Operation

The driver circuit forms a Darlington circuit with two transistors to obtain a large drive current (load current) from a small input current (I/O output current). When the driver input voltage is HIGH (+5V), the transistor is turned on to flow a current in the arrow direction, operating the load. When the driver is turned on, the driver output pin voltage is 0V.

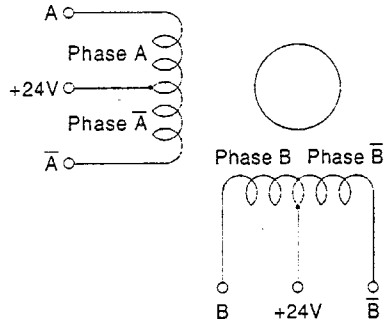


(9) Stepping motor drive circuit

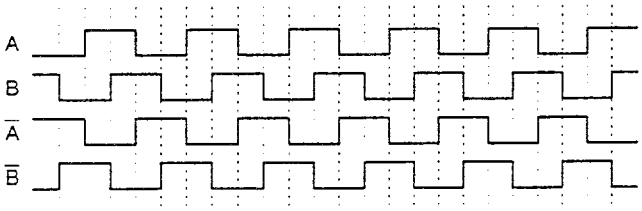
① General

The driver circuit drives the lens drive motor, the mirror base drive motor, the automatic duplex copy tray, the side plate motor, and the rear plate motor.

A: Stepping motor phase A coil drive signal
B: Stepping motor phase B coil drive signal
A: Stepping motor phase A coil drive signal
B: Stepping motor phase B coil drive signal



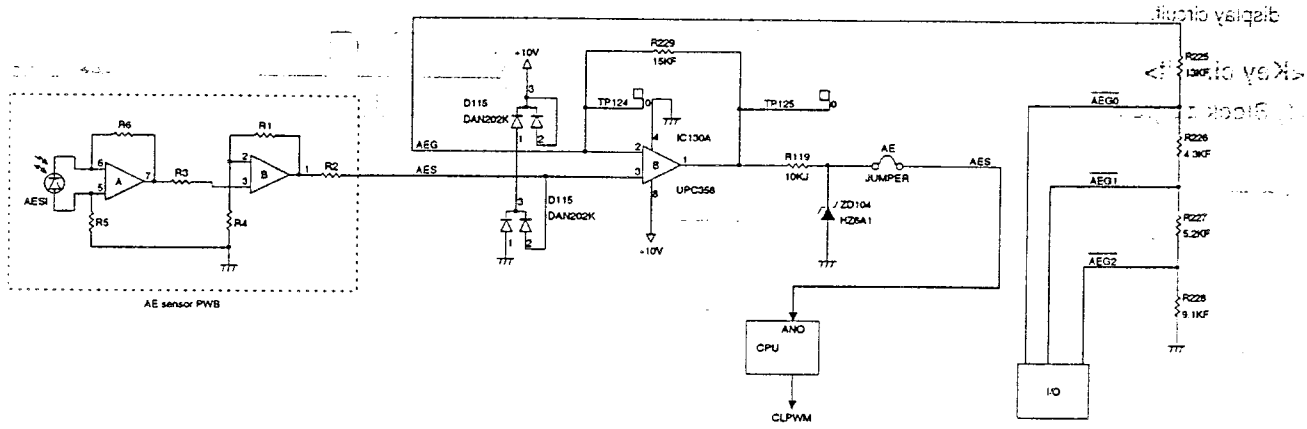
Stepping motor time chart



Drive signal	Lens drive	Mirror base drive	For Side plate	For rear plate
A	LEMT0	MBMT0	PAM1-0	PAM2-0
B	LEMT1	MBMT1	PAM1-1	PAM2-1
C	LEMT2	MBMT2	PAM1-2	PAM2-2
B	LEMT3	MBMT3	PAM1-3	PAM2-3

(10) AE (Auto Exposure) sensor circuit

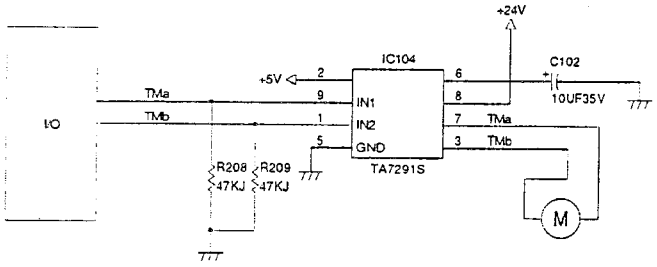
The AE circuit is composed of the AE sensor PWB which is composed of the photo diode, the I-V convertor circuit, and the amplifier circuit, and the amplifier circuit on the control PWB.



Operation amplifier A performs I-V conversion of the original density level (minute current) from the sensor. Operation amplifiers B and C amplify the output of operation amplifier A to a suitable level for inputting to the CPU.
The amplifying level is automatically set by selecting the AE gain signal ($\overline{AEG0}$ ~ $\overline{AEG2}$) outputted from the I/O chip when test command SIM 47 is executed.
AE operation is performed by the software in the control PWB. When a reflected ray enters the sensor, a voltage corresponding to the light quantity is inputted to the CPU. The CPU compares the input voltage and the copy lamp application voltage and controls the copy lamp voltage so that the exposure level corresponds to the original density.

(11) Toner supply motor drive circuit

IC104 is the motor control IC which drives the toner supply motor with the pulse signals (TMa, TMb) outputted from the I/O chip.

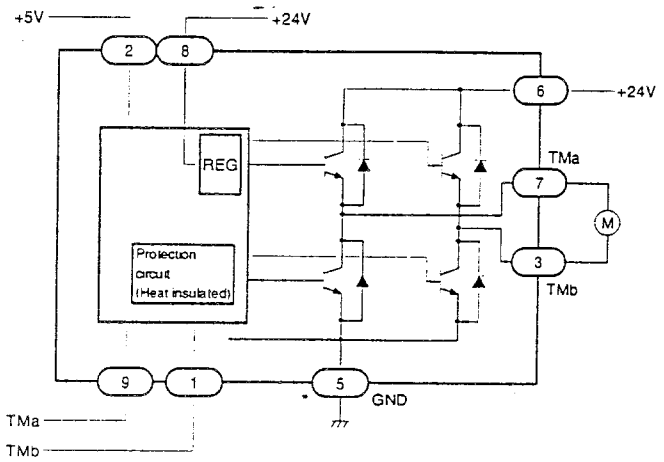


Truth value table

Input		Output		Mode
TMa	TMb	TMa	TMb	
L	L	∞	∞	Stop
H	L	H	L	CW/CCW
L	H	L	H	CCW/CW
H	H	L	L	Brake

∞ : High impedance

Internal circuit



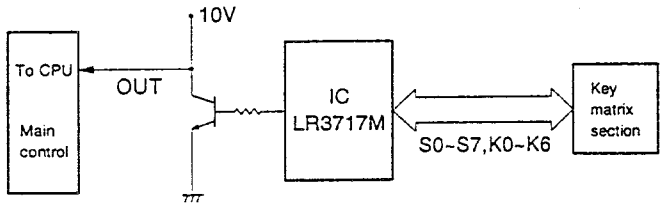
3. Operation circuit

General

- The operation circuit is composed of the key matrix circuit and the display circuit.

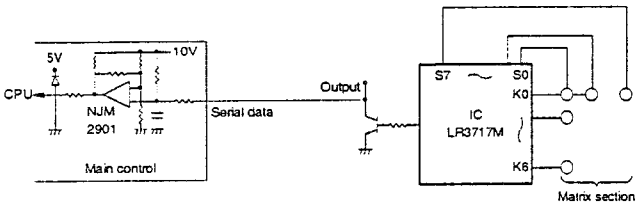
<Key circuit>

(1) Block diagram

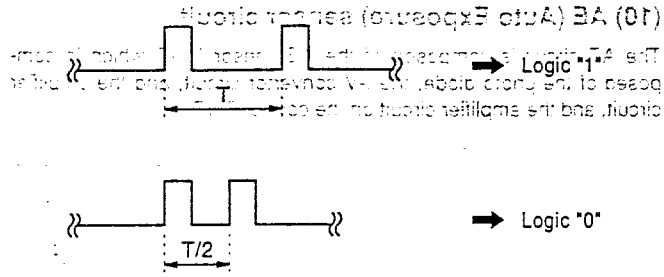


(2) Key detection

Key detection is performed by the key detection IC (LR3717M) with matrix of S0 ~ S7 and K0 ~ K6. Information is set to the CPU by serial data transmission. (& x 8 matrix available)



The transmission system is PPM (Pulse Position Modulation) system using 15 bit data pulse signals.
The PPM transmission makes distinction of pulse width as logic "1" or logic "0."



As shown above, when the pulse interval is T, the pulse is judged as logic "1," and when the pulse interval is T/2, it is judged as logic "0."
Pulse signals of 15 bits are serially sent.
PPM signal is judged from pulse interval "t" as shown below:

When t < 0.4 m : Abnormal
When 0.4 ms < t < 1.6 ms: "0"
When 1.6 ms < t < 3.2 ms: "1"
When 3.2 ms < t : Abnormal

When any abnormal signal enters the circuit, all the bits are cleared. Then the operation starts from the first bit again.
When data of more than 16 bits (17 pulse or more) are inputted, it is judged as an abnormal signal and all the bits are cleared. Then the operation begins from the first bit again.
The 15 bit data assignment is as shown below:

Ⓐ System address (Refer to ✳1.) C1, C2, C3, C4, C5
These data are set with the switches and assigned depending on the system. 56 channels and 2 bit expansion are available for sending commands for one system.

✳1: System address
This bit is set to prevent against malfunction in wireless communication with other devices (VTR, TV, etc.). For this time, communication is made through wires and there is no need to set this bit. Set to "0."

Ⓑ Data C6, C7, C8, C9, C10, C11
These data are assigned with the key input. Commands corresponding to C6 ~ C11 are as shown below:

C6	C7	C8	C9	C10	C11	CH	C6	C7	C8	C9	C10	C11	CH	C6	C7	C8	C9	C10	C11	CH	C6	C7	C8	C9	C10	C11	CH
1	0	0	0	0	0	1	0	0	0	0	1	0	16	1	1	1	1	1	0	31	0	1	1	1	0	1	46
0	1	0	0	0	0	2	1	0	0	0	1	0	17	0	0	0	0	0	1	32	1	1	1	1	0	1	47
1	1	0	0	0	0	3	0	1	0	0	1	0	18	1	0	0	0	0	1	33	0	0	0	0	1	1	48
0	0	1	0	0	0	4	1	1	0	0	1	0	19	0	1	0	0	0	1	34	1	0	0	0	1	1	49
1	0	1	0	0	0	5	0	0	1	0	1	0	20	1	1	0	0	0	1	35	0	1	0	0	1	1	50
0	1	1	0	0	0	6	1	0	1	0	1	0	21	0	0	1	0	0	1	36	1	1	0	0	1	1	51
1	1	1	0	0	0	7	0	1	1	0	1	0	22	1	0	1	0	0	1	37	0	0	1	0	1	1	52
0	0	0	1	0	0	8	1	1	1	0	1	0	23	0	1	1	0	0	1	38	1	0	1	0	1	1	53
1	0	0	1	0	0	9	0	0	0	1	1	0	24	1	1	1	0	0	1	39	0	1	1	0	1	1	54
0	1	0	1	0	0	10	1	0	0	1	1	0	25	0	0	0	1	0	1	40	1	1	1	0	1	1	55
1	1	0	1	0	0	11	0	1	0	1	1	0	26	1	0	0	1	0	1	41	0	0	0	1	1	1	56
0	0	1	1	0	0	12	1	1	0	1	1	0	27	0	1	0	1	0	1	42							
1	0	1	1	0	0	13	0	0	1	1	1	0	28	1	1	0	1	0	1	43							
0	1	1	1	0	0	14	1	0	1	1	1	0	29	0	0	1	1	0	1	44							
1	1	1	1	0	0	15	0	1	1	1	1	0	30	1	0	1	1	0	1	45							

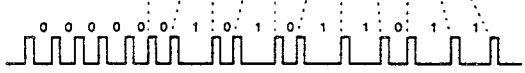
Ⓒ Data expansion C12, C13
These are set with the switches and used to expand commands.

Ⓓ Data judgment K (Refer to ∗2.)
The last bit is for judgement of data transmission system. Date are transmitted as follows by using this bit.

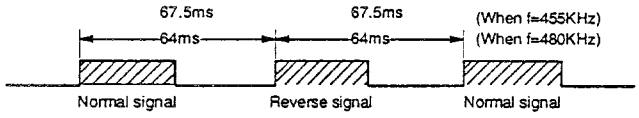
∗2: Data judgment
The data are not reversed in this case.

(a) Normal signals

(b) Reverse signals



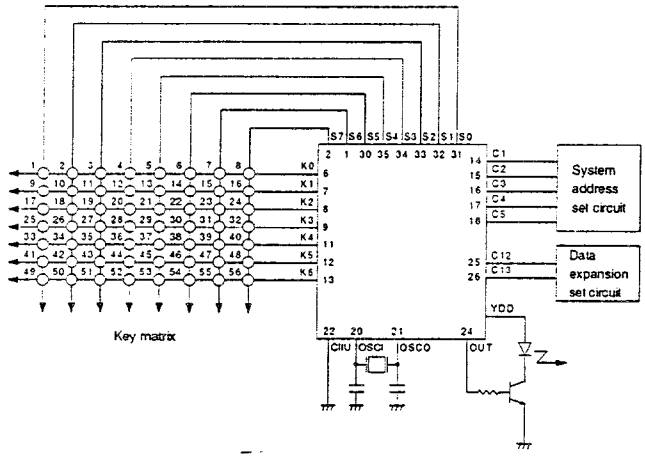
When the data judgment bit is "0," normal signals are transmitted. When it is "1," the reverse signals of C0 ~ C14 and K are transmitted.



As shown above, normal signals and reverse signals are repeated in series in a certain cycle. In the receiver side, judgment between normal and reverse signals is performed with the data judgement bit to form data properly.

Ⓔ Check bit C14
C14 is fixed to GND in the LSI and no pin is provided in the package.

(3) System configuration



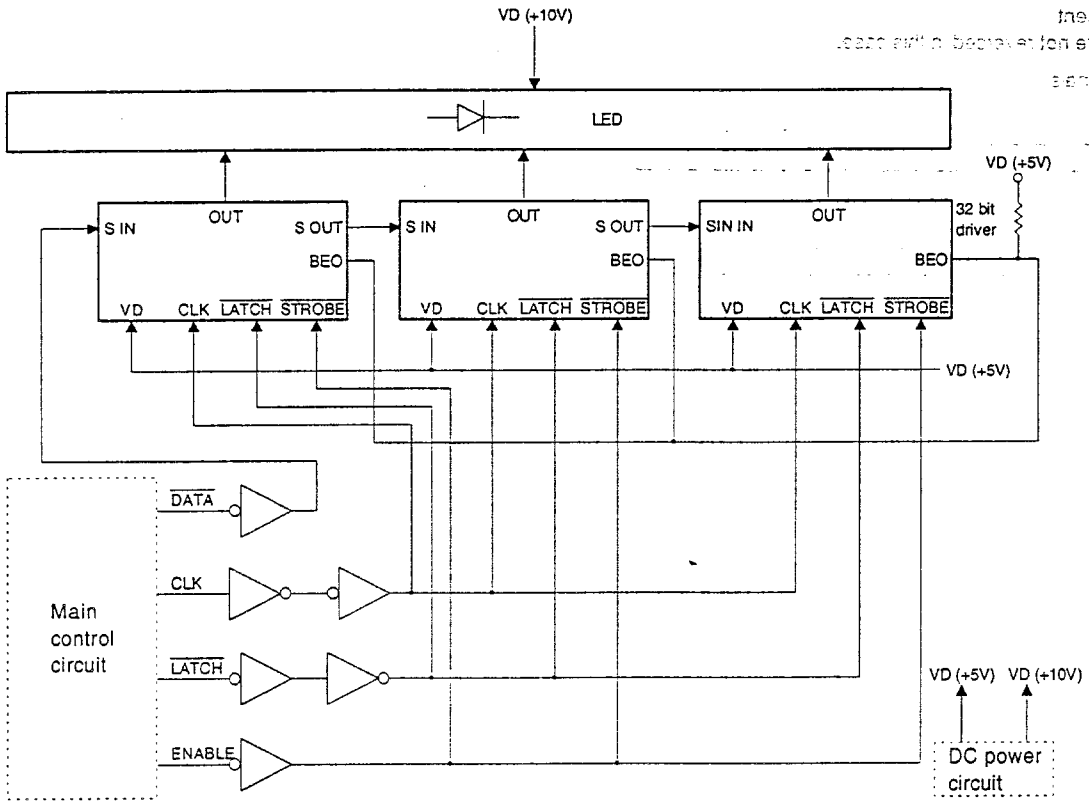
When command [3] is sent, for example, press the key at the intersection between K0 and S2. The 15 bit data at that time is as follows:

[3] 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0
System address bit Data bit

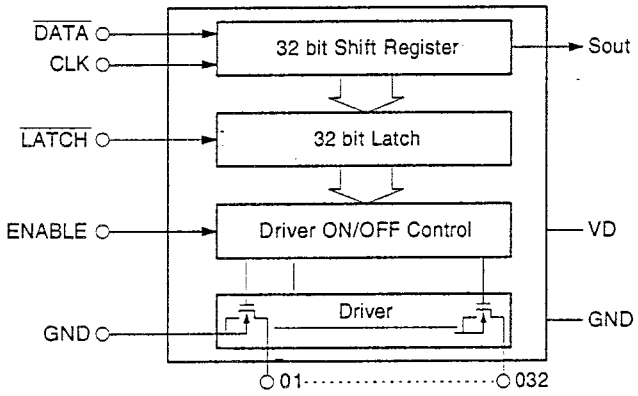
<Display circuit>

This circuit is controlled with the data signal and the control signal from the main control circuit.

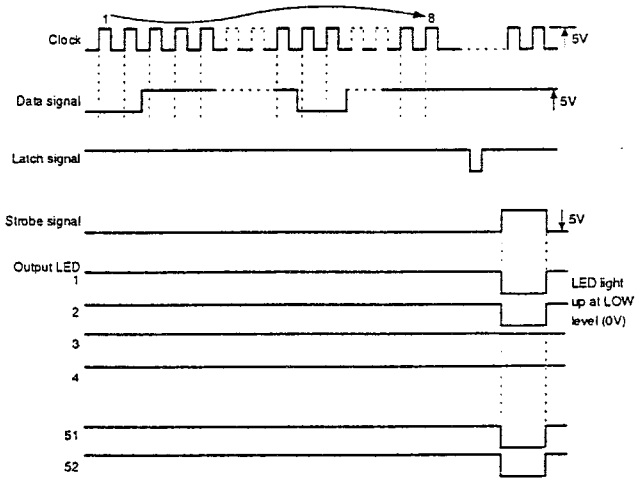
(1) Block diagram



32 bit driver block diagram



(2) Operational description

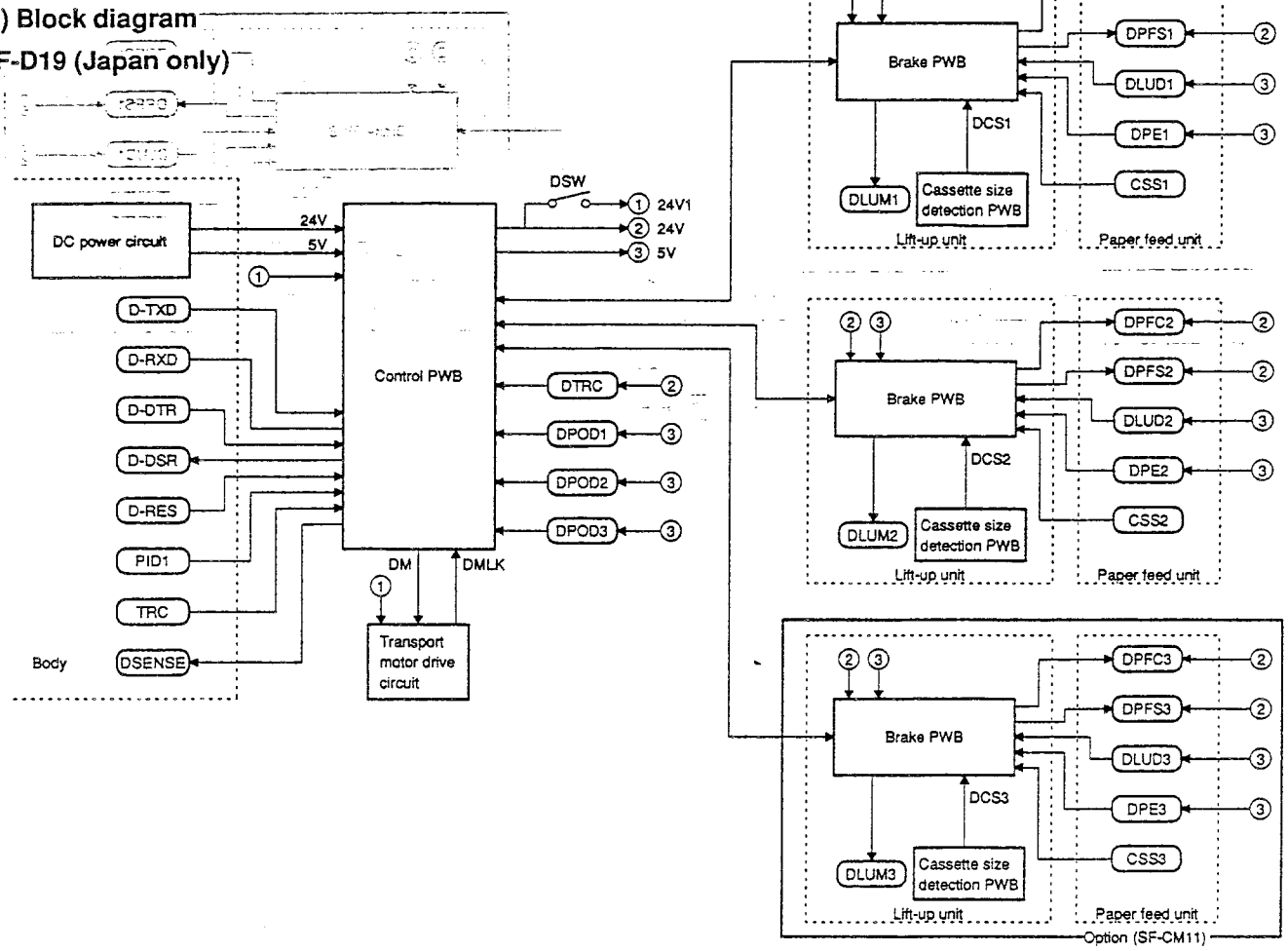


Data signals (8 bit) sent from the main control PWB are shifted at the rising timing of the clock and retained at the resign timing of the latch signal.
The retained data are outputted when STROBE signal becomes HIGH (5V), lighting the LED.

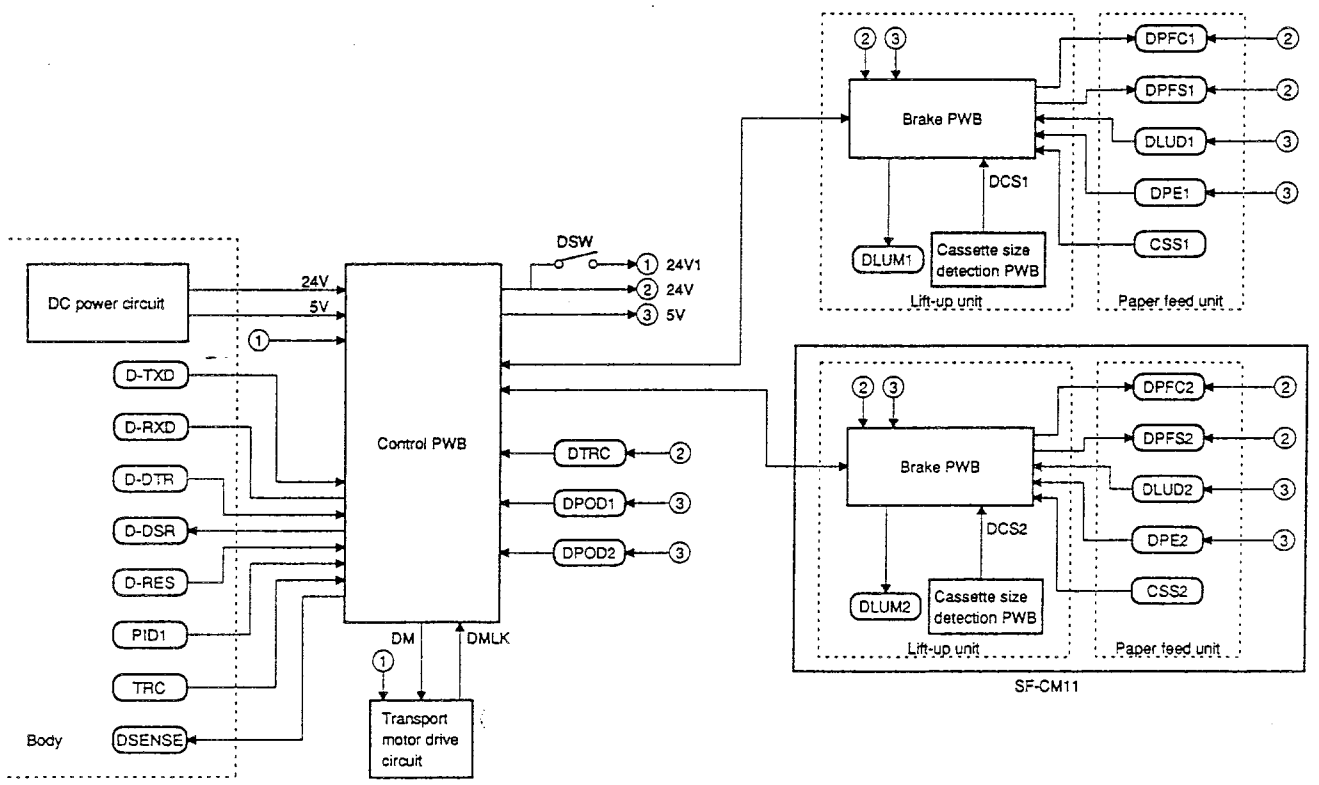
4. Desk circuit

(1) Block diagram

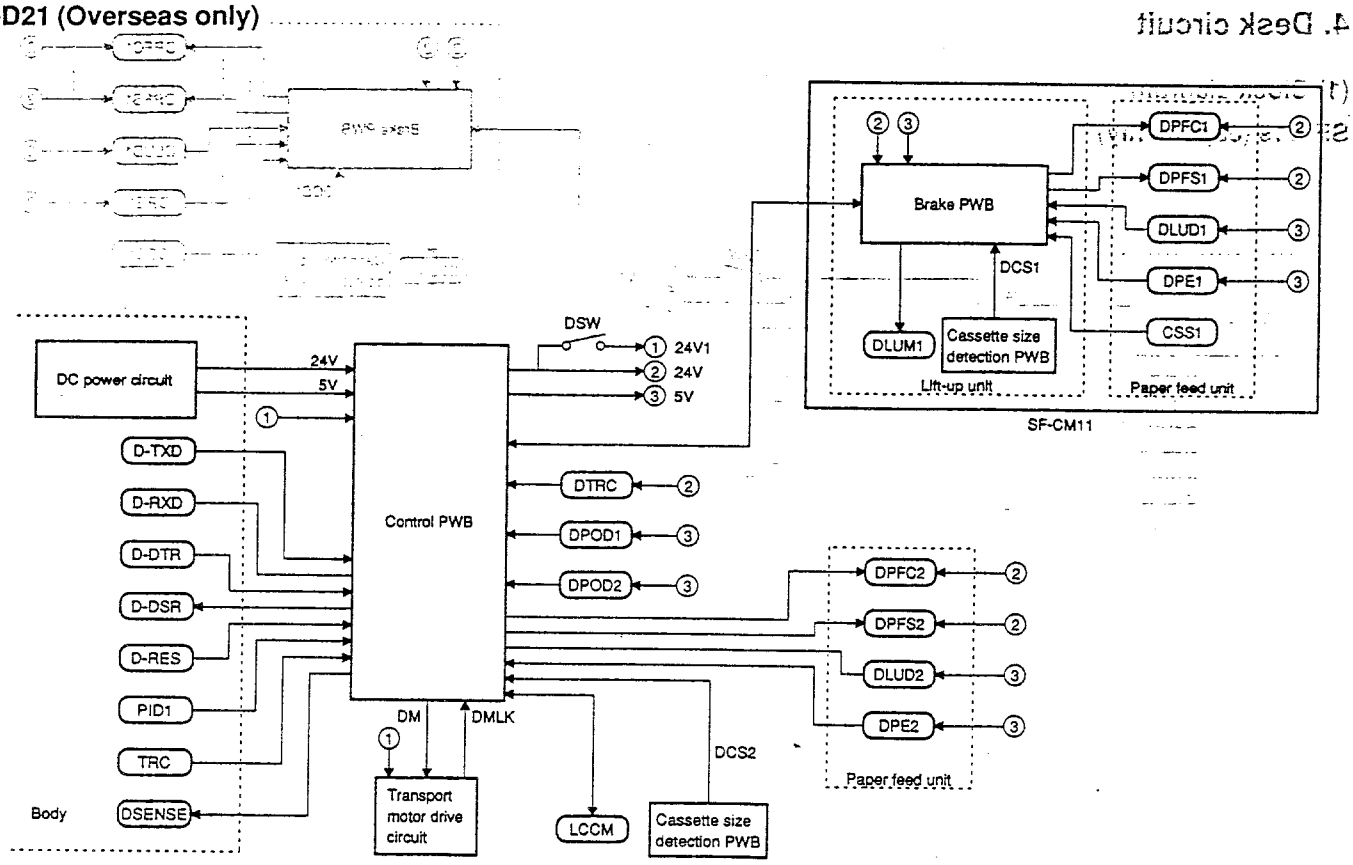
SF-D19 (Japan only)



SF-D20 (Overseas only)



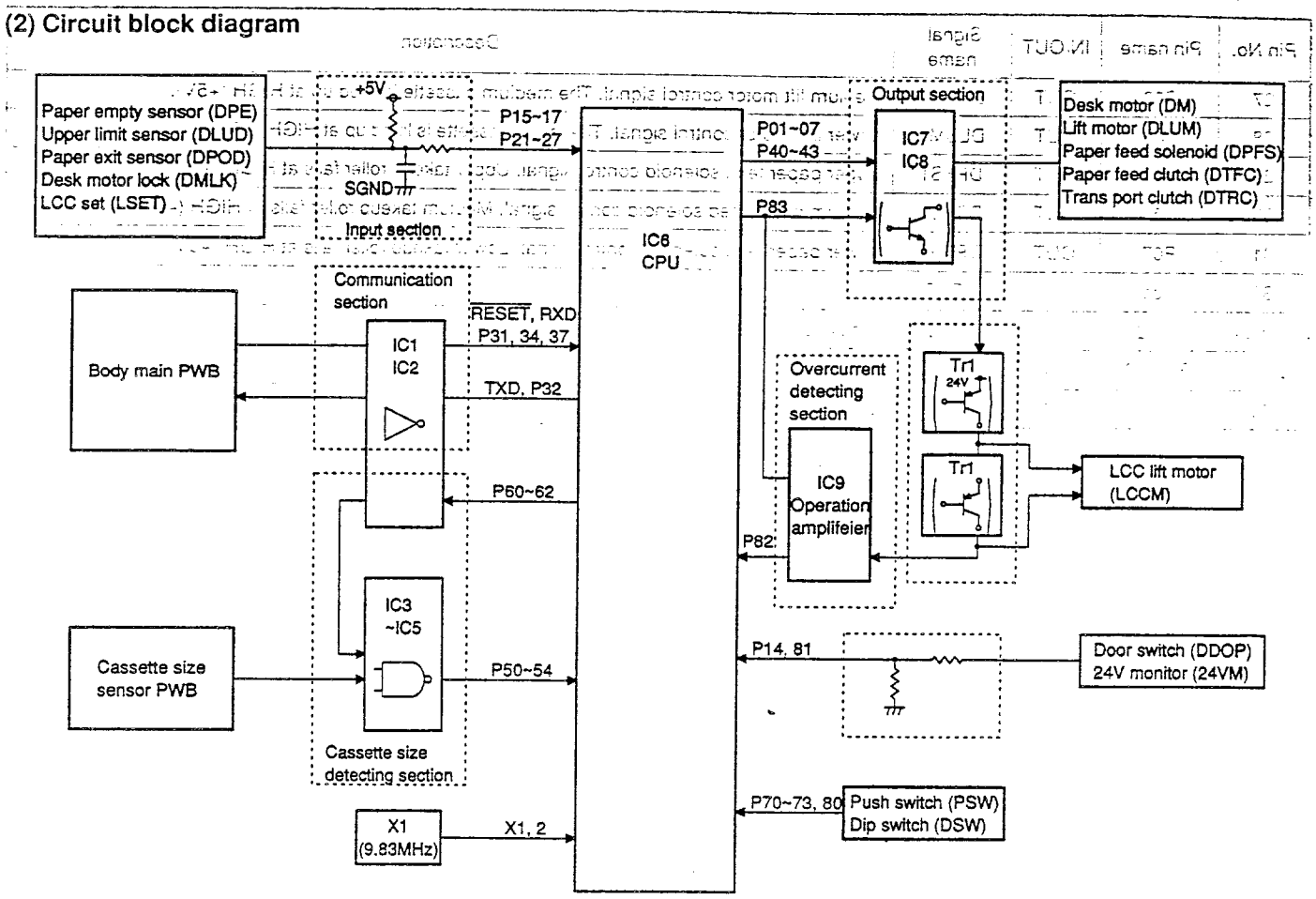
SF-D21 (Overseas only)



CSS1	Desk upper cassette size sensor 1
CSS2	Desk medium cassette size sensor 2
CSS3	Desk lower cassette size sensor 3
D-DSR	Data send ready
D-DTR	Data transmit ready from
D-RES	Desk CPU reset
D-RXD	Receive data to desk
D-TXD	Send data from desk
DLUD1	Desk upper lift up upper limit sensor 1
DLUD2	Desk medium lift up upper limit sensor 2
DLUD3	Desk lower lift up upper limit sensor 3
DLUM1	Desk upper lift up motor 1
DLUM2	Desk medium lift up motor 2
DLUM3	Desk lower lift up motor 3
DMLK	Desk motor lock
DM	Desk motor
DPE1	Desk upper paper presence/empty sensor 1

DPE2	Desk medium paper presence/empty sensor 2
DPE3	Desk lower paper presence/empty sensor 3
DPFC1	Desk upper paper feed clutch 1
DPFC2	Desk medium paper feed clutch 2
DPFC3	Desk lower paper feed clutch 3
DPFS1	Desk upper paper feed solenoid 1
DPFS2	Desk medium paper feed solenoid 2
DPFS3	Desk lower paper feed solenoid 3
DPOD1	Desk upper paper exit sensor 1
DPOD2	Desk medium paper exit sensor 2
DPOD3	Desk lower paper exit sensor 3
DESENSE	Not used.
DTRC	Desk transport roller clutch
LCCM	Large-scale cassette motor
PID1	Paper entry sensor
TRC	Transport roller clutch

(2) Circuit block diagram



Control PWB block diagram

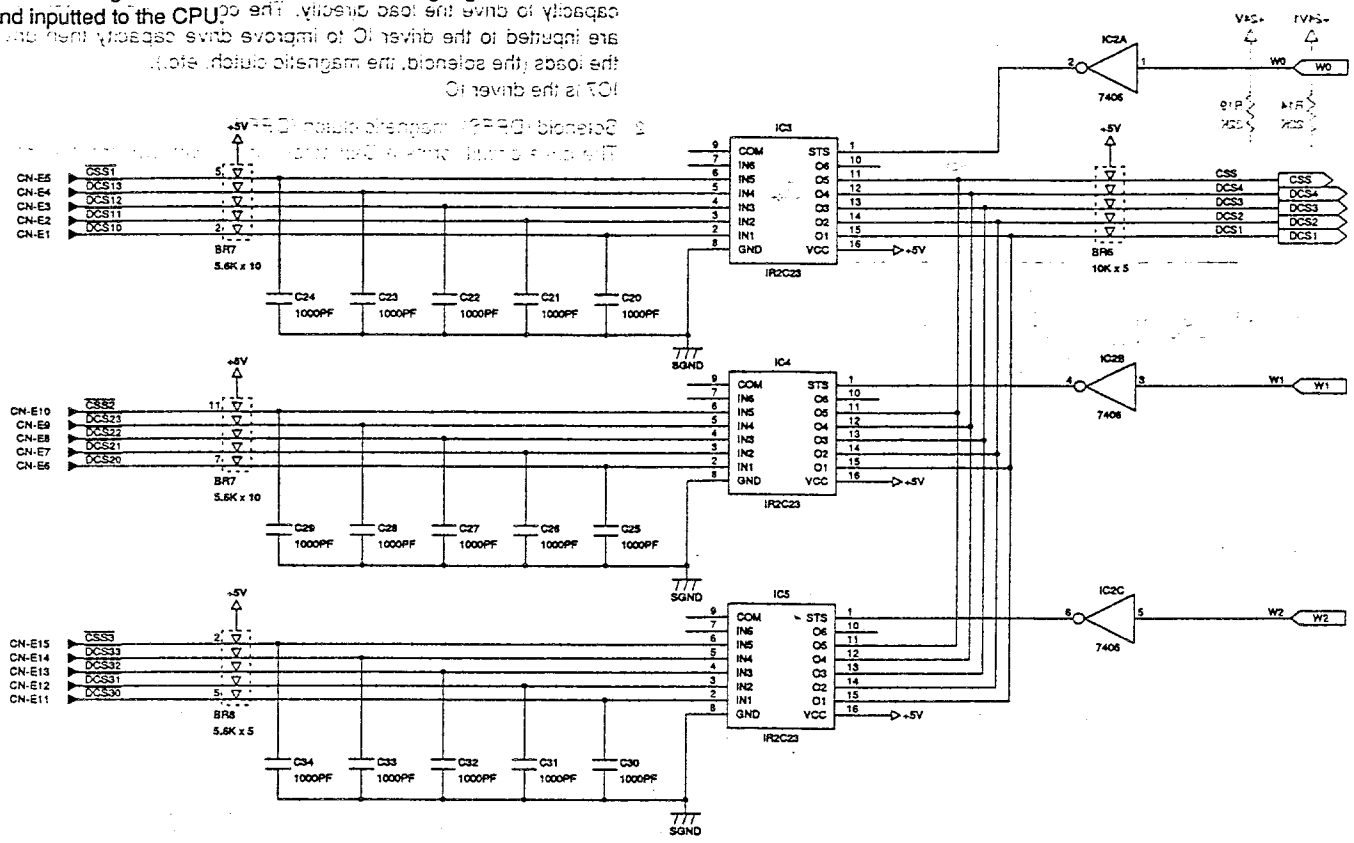
IC6 (CPU) pin signal

Pin No.	Pin name	IN/OUT	Signal name	Description
1	VREF		+5V	
2	AGND		SGND	
3~6	P50~53		$\overline{DCS1}$~$\overline{4}$	Cassette size sense signal (Common to 1 - 3CS)
7	P54	IN	$\overline{CSS}$	Cassette presence signal (Common to 1 - 3CS). LOW (0V) when paper feed unit is attached.
8	P55	IN		
9	P60	OUT	$\overline{W0}$	Data select signal. LOW (0V) when the upper cassette size data are read.
10	P61	OUT	$\overline{W1}$	Data select signal. LOW (0V) when the medium cassette size data are read.
11	P62	OUT	$\overline{W2}$	Data select signal. LOW (0V) when the lower cassette size data are read.
12	P63	– –	–	Not used.
13~16	P70~73	IN	$\overline{DSW1}$~$\overline{4}$	Dip switch. Used for selecting test mode.
17	P80	IN	$\overline{PSW}$	Push switch. Used for test mode operation.
18	P81	IN	$\overline{24VM}$	24V monitor signal. LOW (0V) when any abnormality in 24V is detected.
19	P82	IN	$\overline{OC}$	LCCM overcurrent signal. LOW (0V) when LCCM overcurrent is detected.
20	P83	OUT	LCCM	LCC lift motor control signal. Lifts up at HIGH (+5V).
21	$\overline{NMI}$	IN	$\overline{NMI}$	Pulled up to +5V.
22	$\overline{RESET}$		D-RES	Reset signal. Reset state at LOW (0V).
23	CLK	–	–	Not used.
24	P00	–	–	Not used.
25	P01	OUT	DM	Desk motor control signal. The desk motor rotates at HIGH (+5V).
26	P02	OUT	DLUM1	Upper lift motor control signal. The upper cassette is lifted up at HIGH (+5V).

Pin No.	Pin name	IN/OUT	Signal name	Description
27	P03	OUT	DLUM2	Medium lift motor control signal. The medium cassette is lifted up at HIGH (+5V).
28	P04	OUT	DLUM3	Lower lift motor control signal. The lower cassette is lifted up at HIGH (+5V).
29	P05	OUT	DPFS1	Upper paper feed solenoid control signal. Upper takeup roller falls at HIGH (+5V).
30	P06	OUT	DPFS2	Medium paper feed solenoid control signal. Medium takeup roller falls at HIGH (+5V).
31	P07	OUT	DPFS3	Lower paper feed solenoid control signal. Lower takeup roller falls at HIGH (+5V).
32	Vss		SGND	
33~34	X1~2		X1~2	Clock pulse (9.83MHz)
35~38	P10~13	IN	SGND	
39	P14	IN	$\overline{DDOP}$	Door open signal. LOW (0V) when the door is opened.
40	P15	IN	$\overline{LSET}$	LCC set signal. LOW (0V) when the LCC paper feed unit is installed.
41	P16	IN	DMLK	Desk motor lock signal. HIGH (+5V) when the desk motor lock signal is detected.
42	P17	IN	$\overline{DPE1}$	Upper cassette paper empty sensor signal. LOW (0V) when upper cassette paper empty.
43	P20	IN	$\overline{DPE2}$	Medium cassette paper empty sensor signal. LOW (0V) when medium cassette paper empty.
44	P21	IN	$\overline{DPE3}$	Lower cassette paper empty sensor signal. LOW (0V) when lower cassette paper empty.
45	P22	IN	DLUD1	Upper cassette upper limit sensor signal. HIGH (+5V) when the upper cassette reaches the upper limit.
46	P23	IN	DLUD2	Medium cassette upper limit sensor signal. HIGH (+5V) when the medium cassette reaches the upper limit.
47	P24	IN	DLUD3	Lower cassette upper limit sensor signal. HIGH (+5V) when the lower cassette reaches the upper limit.
48	P25	IN	DPOD1	Upper cassette paper out sensor signal. HIGH (+5V) when copy paper passes through.
49	P26	IN	DPOD2	Medium cassette paper out sensor signal. HIGH (+5V) when copy paper passes through.
50	P27	IN	DPOD3	Lower cassette paper out sensor signal. HIGH (+5V) when copy paper passes through.
51	P40	OUT	DTRC	Transport clutch control signal. HIGH (+5V) when the transport clutch is on.
52	P41	OUT	DPFC1	Upper cassette paper feed clutch control signal. HIGH (+5V) when the upper takeup roller rotates.
53	P42	OUT	DPFC2	Medium cassette paper feed clutch control signal. HIGH (+5V) when the medium takeup roller rotates.
54	P43	OUT	DPFC3	Lower cassette paper feed clutch control signal. HIGH (+5V) when the lower takeup roller rotates.
55	$\overline{EA}$	IN	+5V	
56	RXD	IN	D-TXD	Communication data from the body. (Reception)
57	P31	IN	D-DTR	Send enable signal from the body. HIGH (+5V) when send enable.
58	P32	OUT	D-DSR	Send request signal from the body. HIGH (+5V) when send request.
59	TXD	OUT	D-RXD	Communication data to the body. (Send)
60	P34	IN	TRC	Body transport clutch signal. HIGH (+5V) when the body transport clutch is ON.
61~62	P35~36	–	–	Not used.
63	P37	IN	PID1	BOdy paper entry sensor signal. HIGH (+5V) when paper enters the body.
64	Vcc		+5V	

(3) Cassette size detecting section

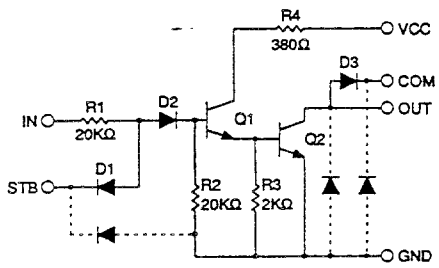
The data select signal of the desired cassette whose size data are required is driven LOW (0V). Then the other cassette size detecting signals are driven HIGH (+5V) and only the selected cassette size is read. The logic of the cassette size detecting signals are reversed and inputted to the CPU.

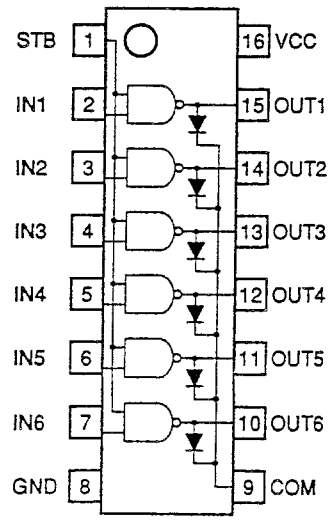


Circuit diagram

- **IC3 - 5 (IR2C23)**

Code	Pin name
STB	Strobe input pin
COM	COMMON pin
IN1~6	Input pin
OUT1~6	Output pin
Vcc	Power pin
GND	GND pin

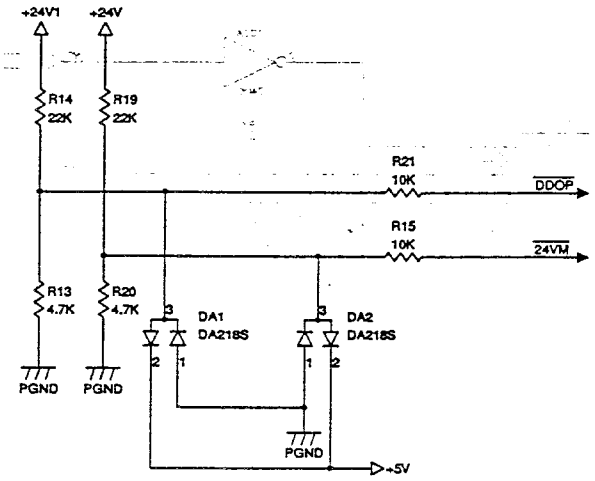




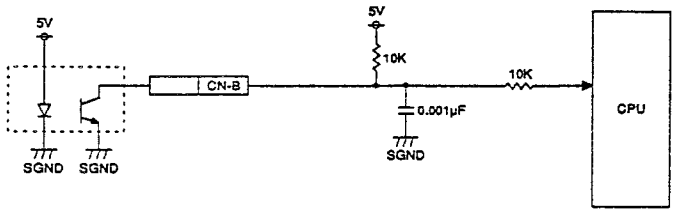
Top view

(4) 24V monitor and door open detecting section

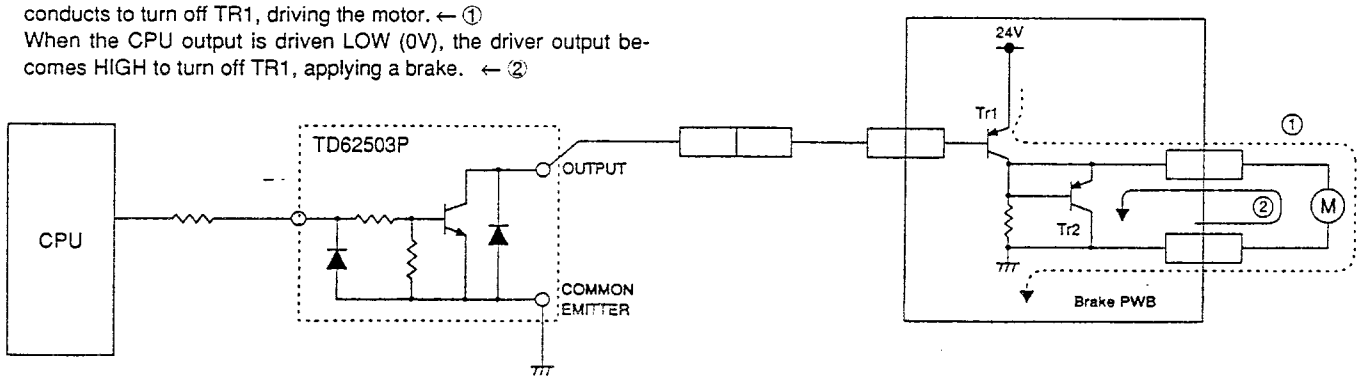
This circuit monitors 24VM and DDOP to check conduction of +24V and +24V1. When the monitor signal is at HIGH (+5V), conduction is made.

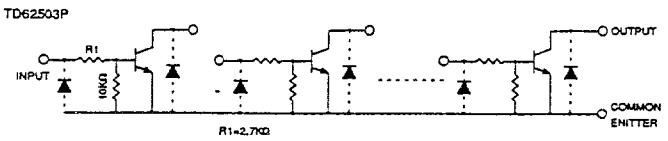


- **Input section**



③ Desk motor (DM), lift motor (DLUM)
When the CPU output (driver input) voltage is HIGH (+5V), the transistors in the driver conduct to drive the driver output pin voltage LOW (0V). As a result, the transistor in the brake PWB conducts to turn off TR1, driving the motor. ← ①
When the CPU output is driven LOW (0V), the driver output becomes HIGH to turn off TR1, applying a brake. ← ②



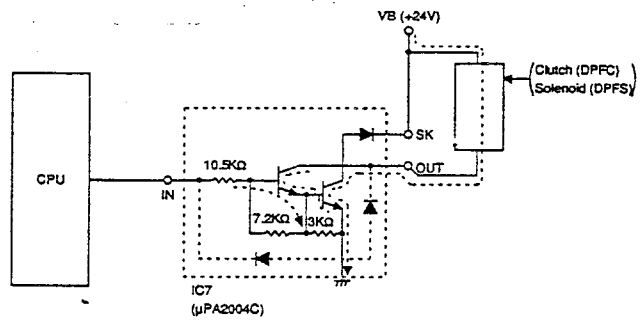


(5) Output section

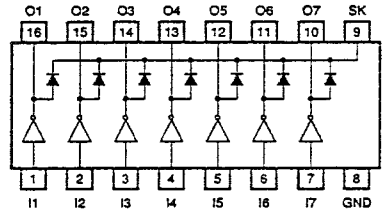
- **Driver circuit**

① General
The control signal of each load outputted from the CPU has no capacity to drive the load directly. The control signals, therefore, are inputted to the driver IC to improve drive capacity then drive the loads (the solenoid, the magnetic clutch, etc.).
IC7 is the driver IC.

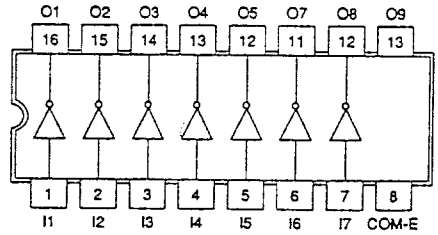
② Solenoid (DPFS), magnetic clutch (DPFC)
The drive circuit forms a Darlington circuit with two transistors to obtain a large drive current (load current) with a small input current (CPU output current). When the driver input voltage is high (+5V), the transistors conduct to flow a current in the arrow direction, operation the loads. When the driver is on, the driver output pin voltage is 0V.



Pole connection (Top view)



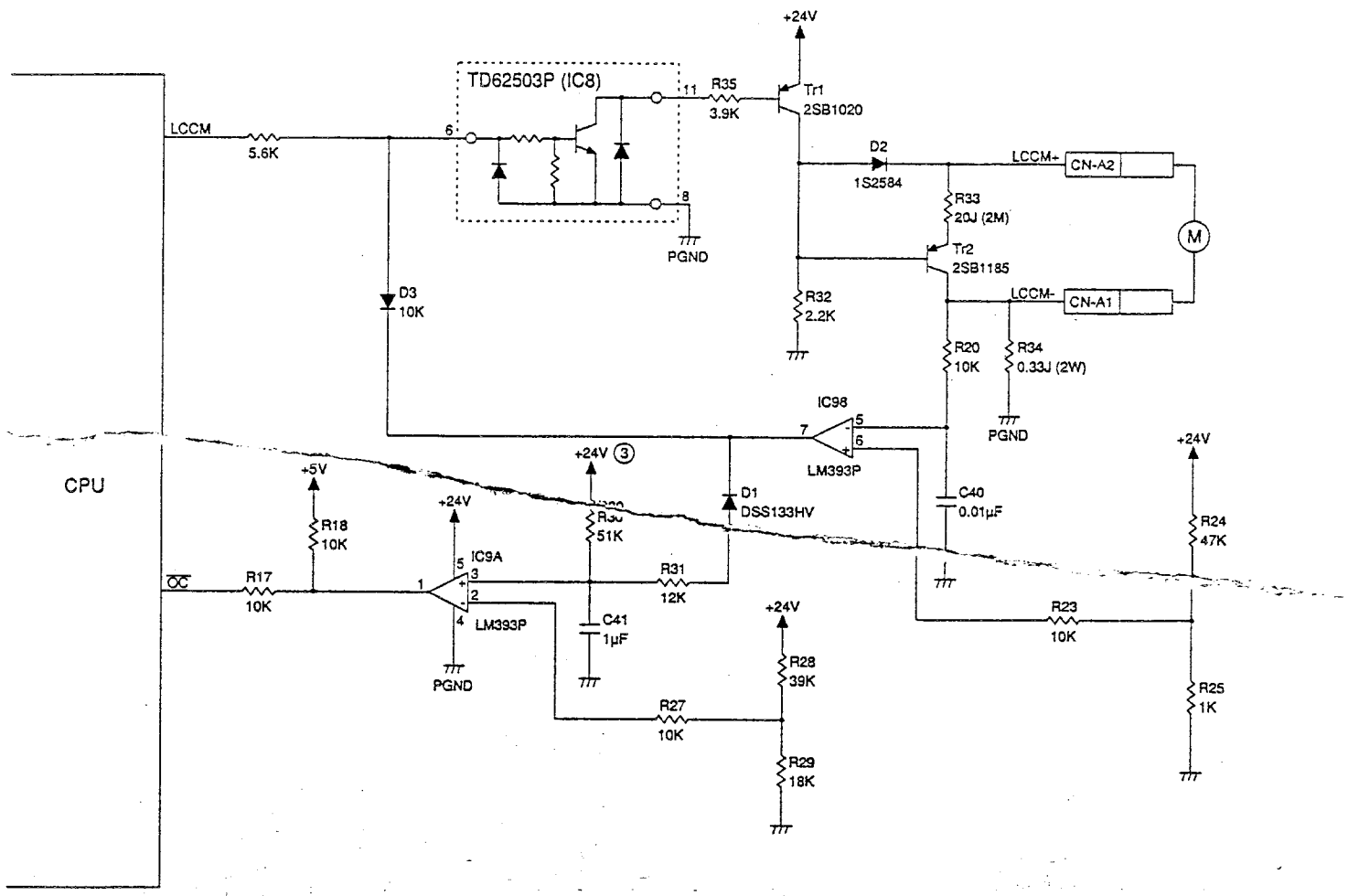
I : Input (Base)
O : Output (Collector)
GND (Common Emitter)



④ LCC lift motor (LCCM)
The operations are the same as (3). The brake circuit, however, is in the desk main PWB.

(6) Overcurrent detecting section

When the current flowing through the desk motor increases, the input voltage in the negative side of IC9B increases. When the input voltage exceeds the input voltage of the IC9B positive side, the IC9B output voltage is driven LOW (0V), pulling the motor signal, turning off TR1, and stopping the desk motor.
Since +24V of ③ is pulled at the same time, the IC9A positive side input voltage is driven LOW (0V) to be smaller than the IC9A negative side input voltage. As a result, the IC9A output voltage is driven LOW (0V). This drives the overcurrent detecting signal LOW (0V), detecting the desk motor overcurrent.



SF-2022
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SF2027

SHARP PARTS GUIDE

CODE: 00ZSF2027PG-M

SF-2022
MODEL SF-2027

オプション (OPTIONS)
[SF-IC11, SF-CM11
SF-DM11, SF-D19
SF-D19H, SF-D20
SF-D21]

このパーツガイドに掲載されている表示価格ランクは、消費税抜きです。

CONTENTS

1 外装(Exteriors)
2 操作部(Operation panel)
3 後キャビ上(Rear exterior upper)
4 縦搬送ユニット(Vertical transport unit)
5 OCカバーユニット(OC Cover unit)
OPTION SF-CV13(USA, CANADA,Australia,U,Kingdom,SEEG)
6 排紙反転ユニット(Paper exit reversing unit)
7 搬送ユニット(Transport unit)
8 前フレーム(Front frame)
9 後フレーム(Rear frame)
10 コピーランプユニット(Copy lamp unit)
11 第2,3,4,5ミラーホルダーユニット(Mirror holder unit)
12 光学ユニット(Optical unit)
13 リフトアップユニット(Lift up unit)
14 現像ユニット(Developing unit)
15 トナーホッパーユニット(Toner hopper unit)
16 DR・クリーナーユニット(DR・Cleaner unit)
17 定着ユニット(Fusing unit)
18 搬送DVガイドユニット(Transport DV guide unit)
19 給紙変速ユニット(Paper feed speed change unit)
20 メイン駆動ユニット(Main drive unit)
21 給紙駆動フレームユニット(Paper feeding drive frame unit)
22 DV駆動ユニット(DV drive unit)
23 AC回路台板ユニット(AC Circuit base plate unit)
24 MCユニット(MC unit)
25 TCケースユニット(TC Cassette unit)
26 500カセット給紙ユニット(500 Cassette paper feeding unit)
27 インナーカセット(Inner cassette)
28 カセットドロアーユニット(Cassette drawer unit)
29 カセット一体ドロアーユニット(国内専用)
(Cassette assembly drawer unit) (JAPAN only)
30 手差しマルチトレイユニット(Manual paper feeding tray unit)
31 手差しマルチ給紙ユニット(Manual multi paper feeding unit)
32 メイン基板(Main PWB)
33 操作基板(Operation PWB)
34 AC回路基板(AC circuit PWB)
35 DC電源基板(DC power supply PWB)
36 梱包材&付属品(Packing material & Accessories)
SF-IC11
37 インナーカセット(Inner cassette)
38 梱包材&付属品(Packing material & Accessories)
SF-CM11
39 カセット一体ドロアーユニット(Cassette assembly drawer unit)
40 500カセット給紙ユニット(500 Cassette paper feeding unit)
41 リフトアップユニット(Lift up unit)
42 梱包材&付属品(Packing material & Accessories)
SF-DM11
43 ADUユニット(ADU unit)
44 ADU駆動ユニット(ADU drive unit)
45 梱包材&付属品(Packing material & Accessories)
SF-D19, SF-D19H
46 デスク外装(Desk exteriors)
47 デスクペーパーガイドユニット(Desk paper guide unit)
48 デスク後フレーム(Desk rear frame)
49 デスク駆動ボックス上ユニット(Desk drive box upper unit)
50 デスク駆動ボックス下ユニット(Desk drive box lower unit)
51 デスク搬送ガイドユニット(Desk transport guide unit)
SF-D19,SF-D19H,SF-D20
52 カセット一体ドロアーユニット(Cassette assembly drawer unit)
53 リフトアップユニット(Lift up unit)
SF-D20
54 デスク外装(Desk exteriors)
55 デスクペーパーガイドユニット(Desk paper guide unit)
56 デスク後フレーム(Desk rear frame)
57 デスク駆動ボックス上ユニット(Desk drive box upper unit)
58 デスク搬送ガイドユニット(Desk transport guide unit)
SF-D21
59 デスク外装(Desk exteriors)
60 デスクペーパーガイドユニット(Desk paper guide unit)
61 デスク後フレーム(Desk rear frame)
62 デスク駆動ボックス上ユニット(Desk drive box upper unit)
63 デスク搬送ガイドユニット(Desk transport guide unit)
64 デスク駆動ユニット(Desk drive unit)
65 デスクLCC外装(Desk LCC exteriors)
SF-D19,SF-D19H, SF-D20,SF-D21
66 500カセット給紙ユニット(500 Cassette paper feeding unit)
67 デスクメイン基板(Desk Main PWB)
68 デスク梱包材&付属品(Desk packing material & Accessories)
■ 索引(Index)

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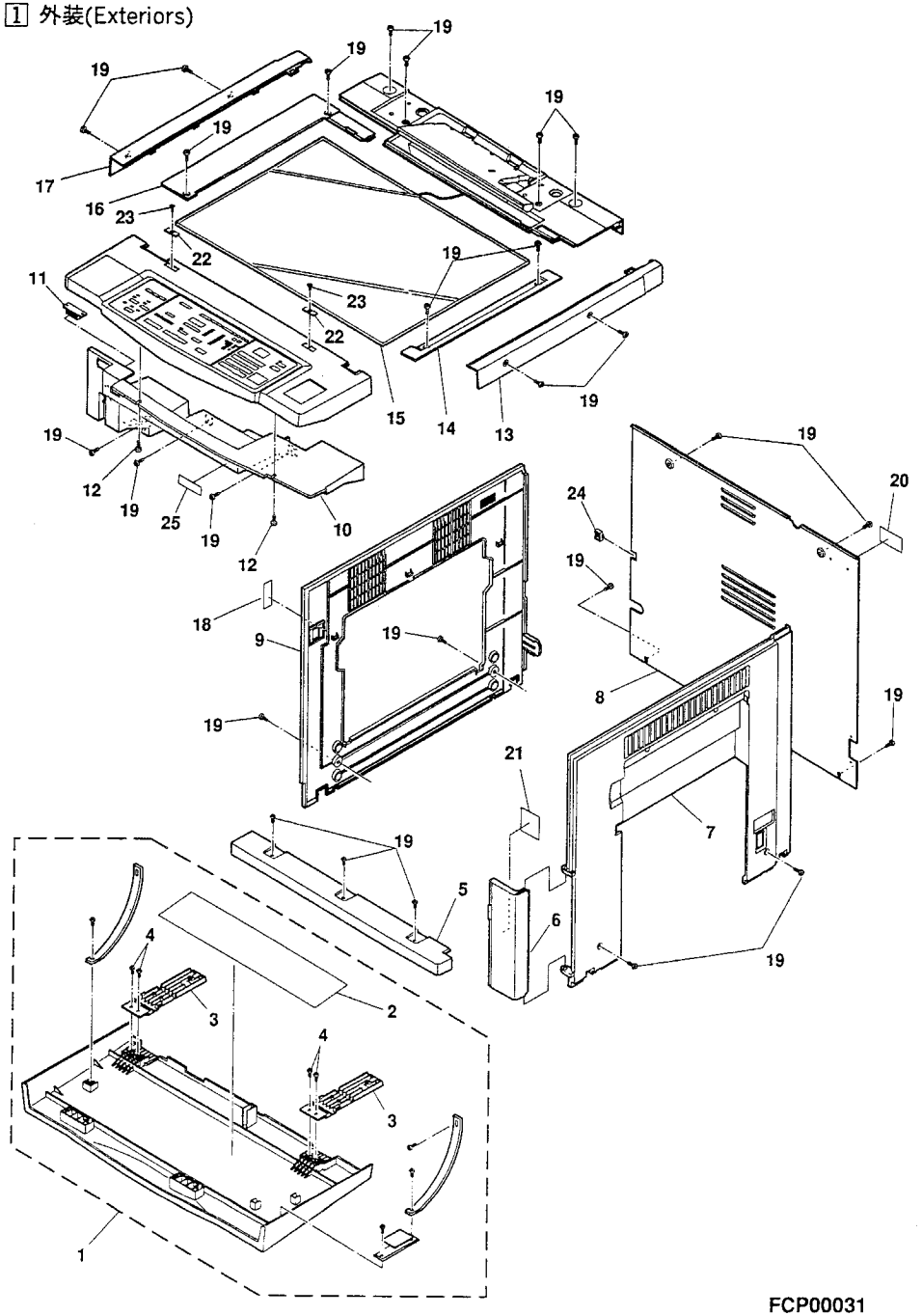
外装(Exteriors)

D.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
	CCAB-0751FC01	B	D	G X	N	D	Front exterior (Japan only) (SF-2022,SF2022H) マエキャビ(NO2~4フクム)
	CCAB-0751FC03	B	E	G X	N	D	Front exterior (USA only) (SF-2022) マエキャビ(NO2~4フクム)
	CCAB-0751FC04	B	D	G X	N	D	Front exterior (Australia,U,Kingdom) (SF-2022) マエキャビ(NO2~4フクム)
	CCAB-0751FC06	B	D	G X	N	D	Front exterior (Indonesia only) (SF-2022S) マエキャビ(NO2~4フクム)
1	CCAB-0751FC05	B	D	G X	N	D	Front exterior(E.F.G.S) (other countries) (SF-2022) マエキャビ(E4)(NO2~4フクム)
	CCAB-0751FC02	B	D	G X	N	D	Front exterior (Japan only) (SF-2027,SF-2027H) マエキャビ(NO2~4フクム)
	CCAB-0751FC07	B	E	G X	N	D	Front exterior (USA only) (SF-2027) マエキャビ(NO2~4フクム)
	CCAB-0751FC08	B	D	G X	N	D	Front exterior (Australia,U,Kingdom) (SF-2027) マエキャビ(NO2~4フクム)
	CCAB-0751FC10	B	D	G X	N	D	Front exterior (Indonesia only) (SF-2027S) マエキャビ(NO2~4フクム)
	CCAB-0751FC09	B	D	G X	N	D	Front exterior(E.F.G.S) (other countries) (SF-2027) マエキャビ(E4)(NO2~4フクム)
	TLABH3083FCZZ	A	G	D X	N	D	Label (Japan only) ホシュテンケンラベル J
2	TLABH3084FCZZ	A	H	D X	N	D	Label (USA,Australia,U,Kingdom) ホシュテンケンラベル U
	TLABH3085FCZZ	A	H	D X	N	D	Label (other Countries) ホシュテンケンラベル(E4)
3	MHNG-0157FCZZ	A	D	D J	N	C	Front exterior hinge マエキャビヒンジ
4	XBTSC40P10000	A	A	D D		C	Screw (4×10) ビス
5	PCOVP1125FCZZ	A	Q	E Z	N	C	Front cover フロントカバー B9
6	CFTA-0088FC01	A	P	E Q	N	C	Waste toner cover (This includes No21) ハイトナーフタ(NO2)フクム
7	CCAB-0749FC02	B	B	G N	N	D	Right exterior (SF-2022H/SF-2027H) ミギキャビ
	CCAB-0749FC01	B	B	G N	N	D	Right exterior ミギキャビ B9
8	GCAB-0754FCZZ	A	Z	G D	N	D	Rear exterior ウシロキャビ B9
9	GCAB-0750FCZZ	B	D	G T	N	D	Left exterior ヒダリキャビ B9
10	PCOVP1124FCZZ	B	A	G J	N	C	Frame cover フレームカバー
11	PMAGT0015FCZZ	A	D	D J		B	Magnet catch (10P) マグネットキャッチ
12	XBTSC40P08000	A	A	D D		C	Screw (4×8) ビス
13	GCAB-0746FCZZ	A	N	E G	N	D	Upper exterior right ウエキャビミギ B9
14	PGIDM1337FCZZ	A	K	E B	N	C	OR guide R ORガイドR
15	PGLSP0074FCZZ	B	A	G J	N	B	Table glass テーブルガラスB9
	CGIDM1338FC01	A	P	E Q	N	C	OR guide L (Japan only) ORガイドL
16	CGIDM1338FC02	A	P	E Q	N	C	OR guide L (Export･･AB series) ORガイドL
	CGIDM1338FC03	A	N	E G	N	C	OR guide L (Inch series) ORガイドL
17	GCAB-0747FCZZ	A	N	E G	N	D	Upper exterior left ウエキャビヒダリ
18	TLABZ2811JFCZZ	A	B	D D		C	Power supply label (Japan only) デンゲンラベル
19	XHBSE40P10000	A	A	D D		C	Screw (4×10) ビス
	TCAUH0918FCZZ	A	A	D D		C	Service caution label (USA,Australia) サービスチュウイラベル
20	TCAUH0687FCZZ	A	A	D D		C	Service caution label (CANADA only) サービスチュウイラベル
	TCAUA0766FCZZ	A	B	D D		C	Service caution label (U,Kingdom only) サービスチュウイラベル
	TCAUA0770FCZZ	A	B	D D		C	Service caution label (Export･･other countries) サービスチュウイラベル
21	TLABZ3091FCZZ	A	C	D J	N	C	Label カイシュウヨウキコウカンラベル
22	LPLTM2573FCZ1	A	D	D J		C	MG Plate MGプレート
23	XBSSE30P10000	A	A	D D		C	Screw (3×10) ビス
24	LHLDW1115FCZZ	A	D	D J	N	C	Eadge holder (SEDS 1210)(USA,Canada,Barbados,Costa Rica,Brazil) エッジサドル
	LBSHZ2050SCZZ	A	B	D D		C	Eadge bushing (EDS-1208U)(other countries) エッジサドル
	TCAUH0819FCZZ	A	A	D D		C	High voltage caution label (Japan only) コウアツチュウイラベル J
25	TCAUH0963FCZZ	A	B	D D	N	C	High voltage caution label (USA,Australia,U,Kingdom) コウアツチュウイラベル U
	TCAUH0821FCZZ	A	A	D D		C	High voltage caution label (Other countries) コウアツチュウイラベル E4

1 外装(Exteriors)



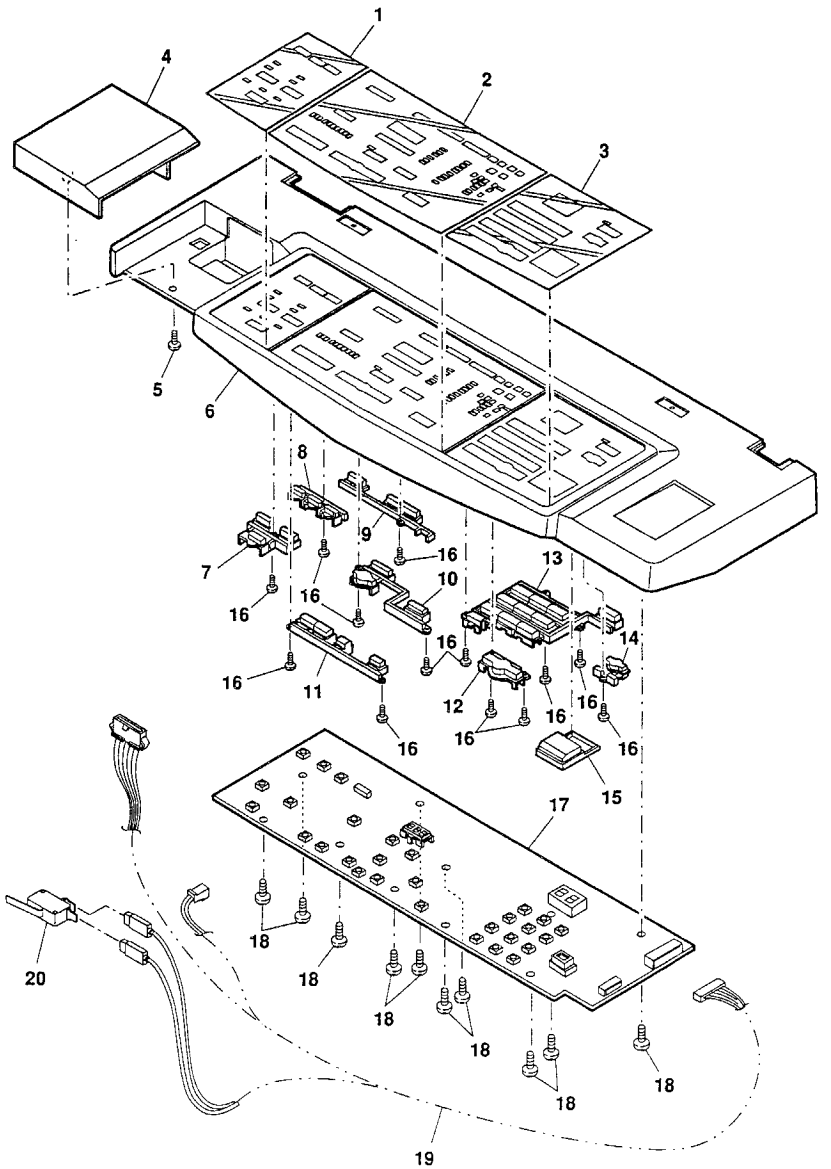
FCP00031

2 操作部(Operation panel)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
1	HiNDP0367FCZZ	AN	EQ	N	D	Key sheet A(Japanese) (Japan only)		キーシート A (ニホンゴ)
	HiNDP0376FCZZ	AN	EQ	N	D	Key sheet A(French) (CANADA,SEEG··Except Germany)		キーシート A (フランスゴ)
	HiNDP0373FCZZ	AN	EQ	N	D	Key sheet A(German) (SEEG)		キーシート A (ドイツゴ)
	HiNDP0370FCZZ	AN	EQ	N	D	Key sheet A(English) (CANADA,SEEG··Except Germany,others)		キーシート A (エイゴ)
	HiNDP0378FCZZ	AT	FG	N	D	Key sheet A(Spanish)		キーシート A (スペインゴ)
	HiNDP0380FCZZ	AT	FG	N	D	Key sheet A(Italian)		キーシート A (イタリアゴ)
	HiNDP0398FCZZ	AT	FG	N	D	Key sheet A(Dutch)		キーシート A (オランダゴ)
2	HiNDP0368FCZZ	AT	FG	N	D	Key sheet B(Japanese) (Japan only)		キーシート B (ニホンゴ)
	HiNDP0394FCZZ	AT	FG	N	D	Key sheet B(French) (CANADA only)	(SF−2022)	キーシート B (フランスゴ)
	HiNDP0374FCZZ	AT	FG	N	D	Key sheet B(German) (SEEG)	(SF−2022)	キーシート B (ドイツゴ)
	HiNDP0388FCZZ	AT	FG	N	D	Key sheet B(English) (CANADA,inch series)	(SF−2022)	キーシート B (エイゴ)
	HiNDP0371FCZZ	AT	FG	N	D	Key sheet B(English) (AB series··Except Germany)	(SF−2022)	キーシート B (エイゴ)
	HiNDP0377FCZZ	AT	FG	N	D	Key sheet B(French)	(SF−2022)	キーシート B (フランスゴ)
	HiNDP0379FCZZ	AT	FG	N	D	Key sheet B(Spanish)	(SF−2022)	キーシート B (スペインゴ)
	HiNDP0381FCZZ	AT	FG	N	D	Key sheet B(Italian)	(SF−2022)	キーシート B (イタリアゴ)
	HiNDP0399FCZZ	AT	FG	N	D	Key sheet B(Dutch)	(SF−2022)	キーシート B (オランダゴ)
	HiNDP0396FCZZ	AT	FG	N	D	Key Sheet B(French) (CANADA only)	(SF−2027)	キーシート B (フランスゴ)
	HiNDP0383FCZZ	AR	EZ	N	D	Key Sheet B(German) (SEEG)	(SF−2027)	キーシート B (ドイツゴ)
	HiNDP0395FCZZ	AT	FG	N	D	Key sheet B(English) (CANADA,inch series)	(SF−2027)	キーシート B (エイゴ)
	HiNDP0382FCZZ	AT	FG	N	D	Key sheet B(English) (AB series··Except Germany)	(SF−2027)	キーシート B (エイゴ)
	HiNDP0384FCZZ	AT	FG	N	D	Key sheet B(French)	(SF−2027)	キーシート B (フランスゴ)
	HiNDP0385FCZZ	AT	FG	N	D	Key sheet B(Spanish)	(SF−2027)	キーシート B (スペインゴ)
	HiNDP0386FCZZ	AT	FG	N	D	Key sheet B(Italian)	(SF−2027)	キーシート B (イタリアゴ)
	HiNDP0400FCZZ	AT	FG	N	D	Key sheet B(Dutch)	(SF−2027)	キーシート B (オランダゴ)
3	HiNDP0369FCZZ	AR	EZ	N	D	Key sheet C(Japanese) (Japan only)		キーシート C (ニホンゴ)
	HiNDP0375FCZZ	AR	EZ	N	D	Key sheet C (SEEG,CANADA)		キーシート C
	HiNDP0372FCZZ	AR	EZ	N	D	Key sheet C(English) (Other countries)		キーシート C (エイゴ)
4	PFTA−0089FCZZ	AK	EB	N	C	Cover		オーデイターフタ B9
5	XBPSD40P08000	AA	DD		C	Screw (4×8)		ビス
6	HPNLC0208FCZZ	AW	FX	N	D	Operation panel		ソウサパネル
7	JBTN−0144FCZZ	AC	DJ	N	C	Duplex sorter Key		リヨウメンソーターキー
8	CBTN−0143FC01	AD	DJ	N	C	Light gray Key		ライトグレーキー
9	CBTN−0145FC01	AE	DS	N	C	Zoom Key (SF−2022··Japan only)(SF−2027)		ズームキー
	CBTN−0142FC01	AE	DS	N	C	Zoom Key (SF−2022··Export)		ズームキー
10	CBTN−0141FC01	AE	DS	N	C	Blue Key		ブルーキー
11	CBTN−0140FC01	AE	DS	N	C	Photo Key		フォトキー
12	CBTN−0139FC01	AD	DJ	N	C	CL Key		クリヤーキー
13	CBTN−0138FC01	AG	DS	N	C	Ten Key		テンキー
14	CBTN−0137FC01	AD	DJ	N	C	CA Key		CAキー
15	CBTN−0136FC31	AE	DS	N	E	Copy key unit		コピーキー ユニット
16	XEPSD20P05000	AA	DD		C	Screw (2×5)		ビス
17	CPWBF0929FC51	BS	NE	N	E	Operation PWB (Japan only)		ソウサキバン
	CPWBF0929FC52	BS	NE	N	E	Operation PWB (Export)	(SF−2022)	ソウサキバン B9A
	CPWBF0929FC53	BS	NE	N	E	Operation PWB (Export)	(SF−2027)	ソウサキバン B9C
18	XJPSD30P06000	AA	DD		C	Screw (3×6)		ビス
19	DHAi−2036FCZZ	AQ	EZ	N	C	Operation main harness		ソウサブメインハーネス
20	QSW−M0319FCZZ	AG	DS		B	Door switch (100V series)		ドアースイッチ
	QSW−M0372FCZZ	AH	DX		B	Door switch (200V series)		ドアースイッチ

SF2027

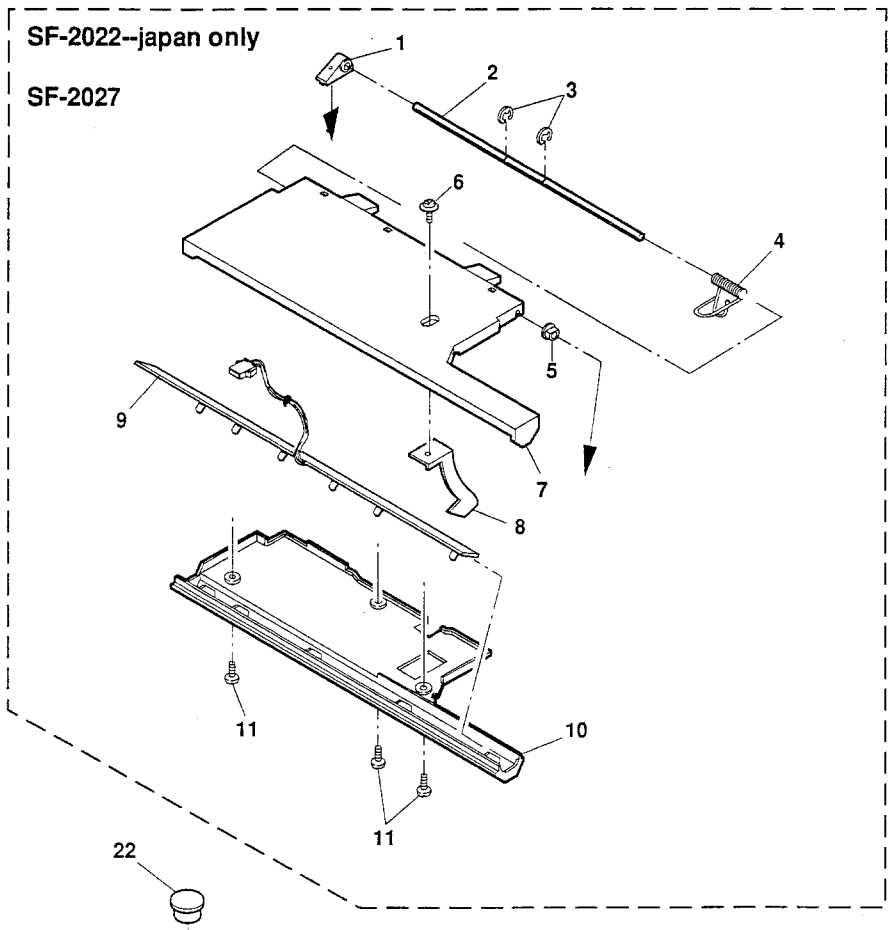
2 操作部(Operation panel)

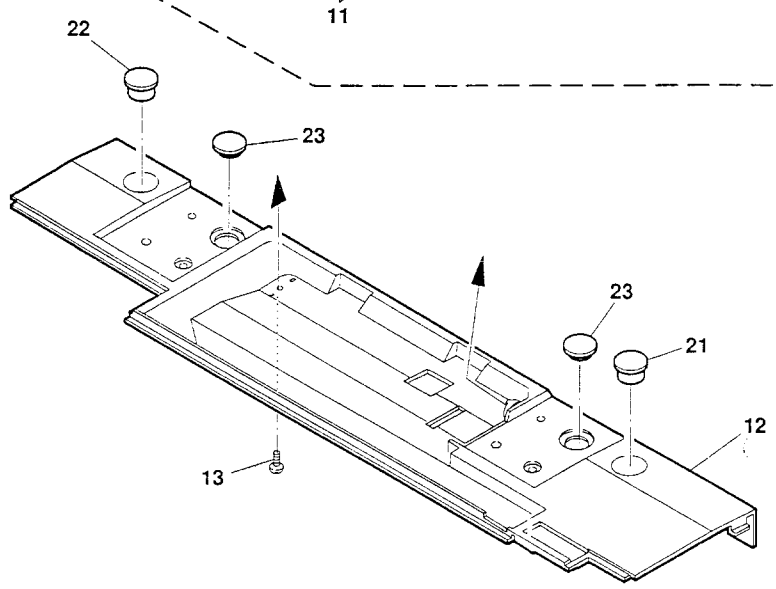


FCP00032

3 後キャビ上(Rear exterior upper)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LHLDZ1085FCZZ	AD	DJ	N	C	Original detection fulcrum holder (SF−2022‥Japan only)(SF−2027)	ゲンコウケンチシテンホルダー B9
2	NSFTZ1805FCZZ	AE	DS	N	C	Original detection fulcrum shaft (SF−2022‥Japan only)(SF−2027)	ゲンコウケンチシテンジク
3	XRESP30−04000	AA	DD		C	E type ring (SF−2022‥Japan only)(SF−2027)	Eリング
4	MSPRT1563FCZZ	AC	DD		C	Manuscript detect spring (SF−2022‥Japan only)(SF−2027)	ゲンコウケンチスプリング
5	LBSHZ1102CCZZ	AC	DD		B	Bushing 1 (SF−2022‥Japan only)(SF−2027)	ゴムローラー 1 ブッシング
6	XXHSP30L06000	AB	DD		C	Screw (3×6)(SF−2022‥Japan only)(SF−2027)	ビス
7	MARMP0147FCZZ	AK	EB	N	C	Original detection arm upper (SF−2022‥Japan only)(SF−2027)	ゲンコウケンチアーム ウエ
8	PSLDH0170FCZZ	AD	DJ	N	C	Original detection shield plate (SF−2022‥Japan only)(SF−2027)	ゲンコウケンチシャコウイタ
9	CPWBF0934FC31	AX	FX	N	E	ORS PWB (Japan only)	ORSハッコウキバン J
	CPWBF0934FC32	AX	FX	N	E	ORS PWB (Export) (SF−2027)	ORSハッコウキバン EX
10	MARMP0148FCZZ	AH	DX	N	C	Original detection arm lower (SF−2022‥Japan only)(SF−2027)	ゲンコウケンチアーム シタ
11	XEPSD30P05000	AA	DD		C	Screw (3×5)(SF−2022‥Japan only)(SF−2027)	ビス
12	GCAB−0748FCZ1	AW	FQ	N	D	Upper exterior rear (SF−2022‥Japan only)(SF−2027)	ウエキャビウシロ
	GCAB−0748FCZZ	AW	FQ	N	D	Upper exterior rear (SF−2022‥Export)	ウエキャビウシロ
13	XEPSD30P06000	AA	DD		C	Screw (3×6)	ビス
21	PCOVP0911FCZZ	AB	DD		C	Upper exterior rear cover R (USA,CANADA,Australia U,Kingdom,SEEG)	ウエキャビアトカバー R
22	PCOVP0941FCZZ	AB	DD		C	Upper exterior rear cover L (USA,CANADA,Australia U,Kingdom,SEEG)	ウエキャビアトカバー L
23	PFTA−0091FCZZ	AC	DJ	N	C	Cover	カクシフタ

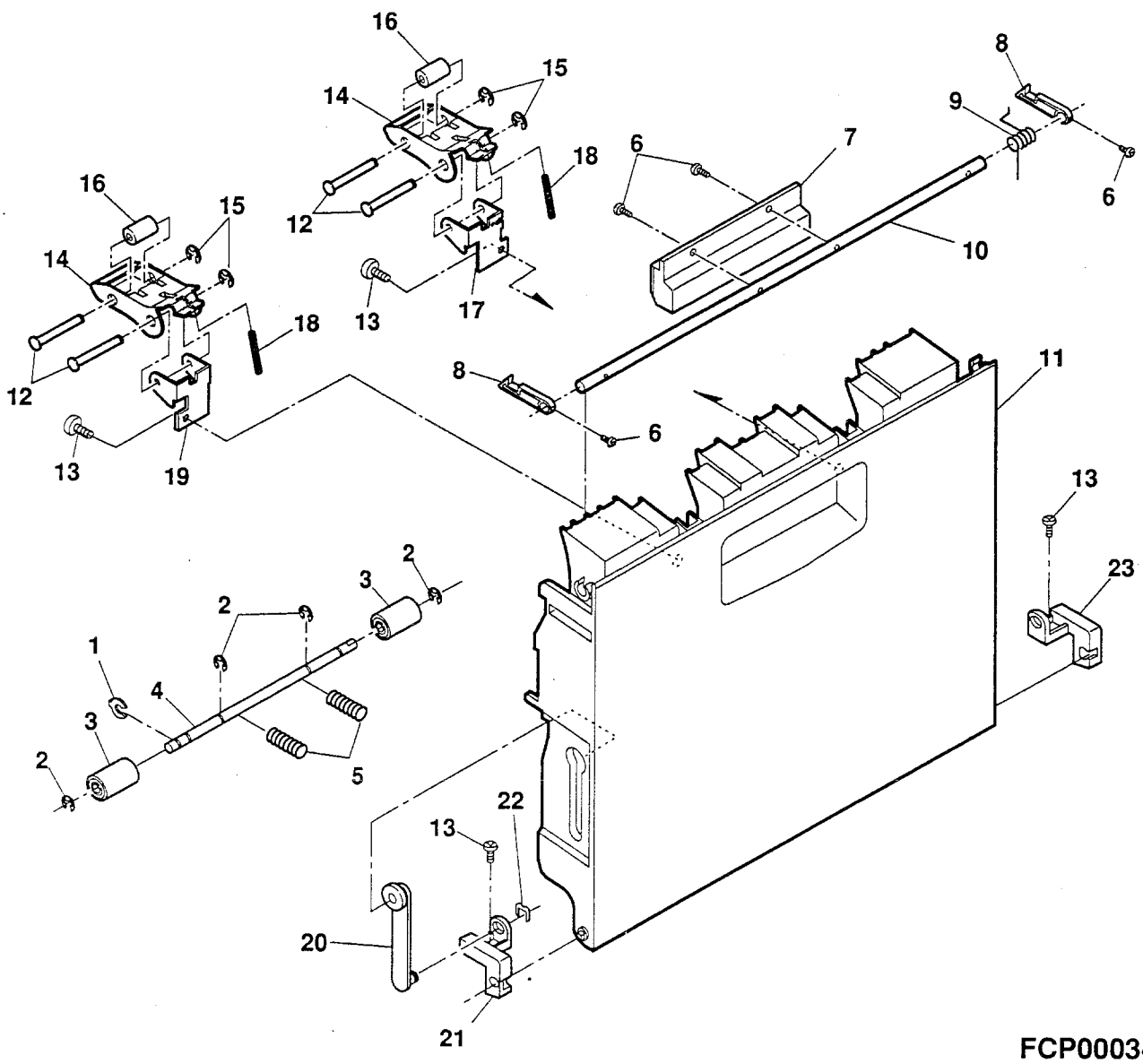




FCP00033

4 縦搬送ユニット(Vertical transport unit)

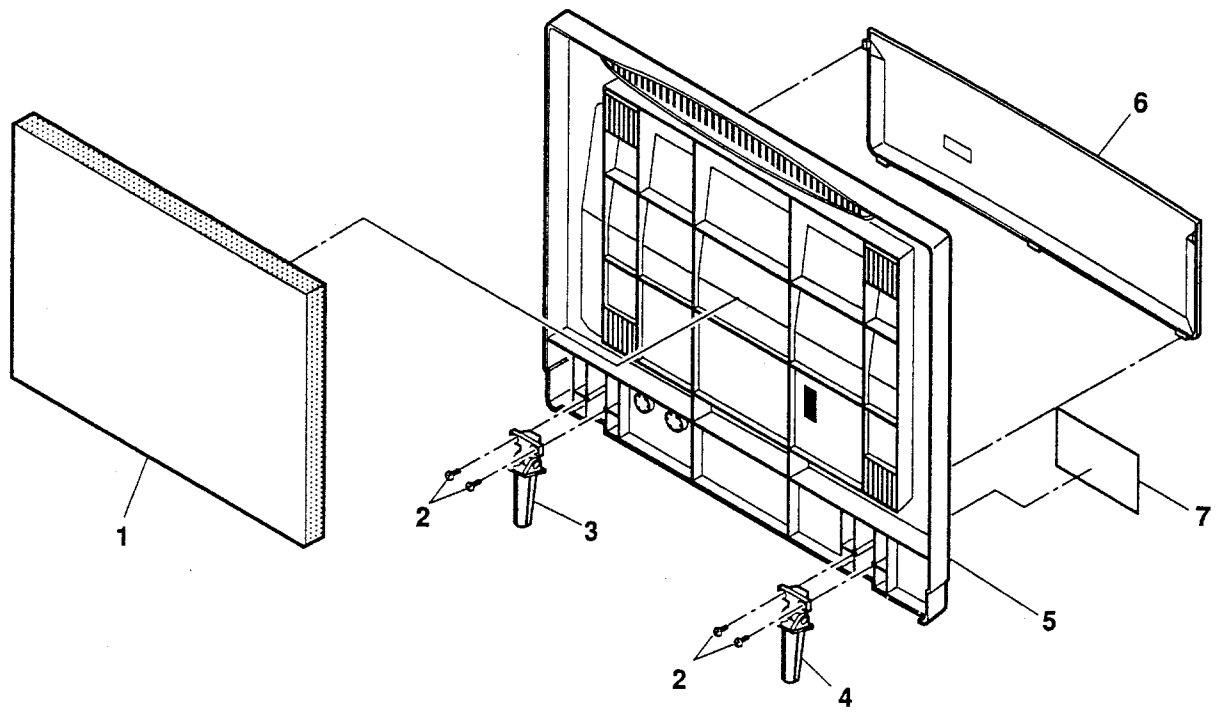
NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
2	XRESP50-06000	AA	DD		C	E type ring	Eリング
3	NROLP0896FCZZ	AC	DD	N	C	Transport roller	ハンソウジュウドウローラー
4	NSFTZ1775FCZZ	AK	EB	N	C	Transport shaft	ハンソウジュウドウジク
5	MSPRC1948FCZZ	AB	DD	N	C	Roller pressure spring	ローラーアツセツスプリング
6	XBPSD30P06000	AA	DD		C	Screw (3×6)	ビス
7	MLEVP0595FCZZ	AF	DS	N	C	Guide lock release lever	ガイドロックカイジョレバー
8	MLEVP0594FCZZ	AD	DJ	N	C	Guide lock lever	ガイドロックレバー
9	MSPRD1949FCZZ	AB	DD	N	C	Guide lock release spring	ガイドロックカイジョスプリング
10	NSFTZ1735FCZZ	AN	EG	N	C	Guide lock release shaft	ガイドロックカイジョジク
11	PGIDM1353FCZZ	AY	FX	N	C	Transport guide	ハンソウガイド
12	NSFTZ1825FCZZ	AD	DJ	N	C	Transport shaft 2	ハンソウジュウドウジク 2
13	XHBSD40P10000	AA	DD		C	Screw (4×10)	ビス
14	LHLDZ1116FCZZ	AD	DJ	N	C	Roller holder	ローラーホルダー
15	XRESP30-06000	AA	DD		C	E type ring	Eリング
16	NROLP0933FCZZ	AE	DS	N	C	Transport roller 2	ハンソウジュウドウローラー 2
17	LPLTM4151FCZZ	AC	DD	N	C	Roller fixing Plate R	ローラートリツケイタ R
18	MSPRT2000FCZZ	AB	DD	N	C	Roller pressure spring 2	ローラーアツセツスプリング2
19	LPLTM4150FCZZ	AC	DD	N	C	Roller fixing Plate F	ローラートリツケイタ F
20	LSTPP0275FCZZ	AE	DS	N	C	Stopper	ストッパー
21	LHLDZ1076FCZZ	AD	DJ	N	C	Height transport guide holder	タテハンソウガイドシテンホルダー
22	PRNGP0077FCZZ	AA	DD	N	C	Ring (E7)	ジュシセイリングE7
23	LHLDZ1107FCZZ	AD	DJ	N	C	Height transport guide holder R	タテハンソウガイドシテンホルダーR



FCP00034

5 OCカバーユニット(OC cover unit)option SF-CV13··USA,CANADA,Australia,U,Kingdom,SEEG

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PSHEZ2714FCZZ	AT	FG		C	OC sheet (Japan only)	OCマット
	PSHEZ2715FCZZ	AU	FQ		C	OC sheet (Except Japan,USA,CANADA,Australia,SEEG,U,Kingdom)	OCマット
2	XJBSD40P12000	AA	DD		C	Screw (4×12)(Except USA,CANADA,Australia,SEEG,U,Kingdom)	ビス
3	MHNG-0086FCZZ	AL	EG		C	OC hinge (Except USA,CANADA,Australia,SEEG,U,Kingdom)	OCヒンジ
4	MHNG-0096FCZZ	AL	EG		C	OC hinge R (Except USA,CANADA,Australia,SEEG,U,Kingdom)	OCヒンジ R
5	GCOVH0206FCZZ	BA	GJ	N	D	OC cover (Except USA,CANADA,Australia,SEEG,U,Kingdom)	OCカバーB9
6	PSTK-0015FCZZ	AQ	EZ	N	D	Original stocker (Except USA,CANADA,Australia,SEEG,U,Kingdom)	オリジナルストッカー
7	TLABH3076FCZZ	AD	DJ	N	C	Condition label(Japanese) (Japan only)	コンディションラベル (ニホンゴ)
	TLABH3077FCZZ	AD	DJ	N	C	Condition label(English) (USA,Australia,SEEG,U,Kingdom)	コンディションラベル (エイゴ)
	TLABH3079FCZZ	AD	DJ	N	C	Condition label(German) (SEEG)	コンディションラベル (ドイツゴ)
	TLABH3078FCZZ	AD	DJ	N	C	Condition label(E,F,G,S) (CANADA only)	コンディションラベル E4
	TLABH3080FCZZ	AD	DJ	N	C	Condition label(French)	コンディションラベル (フランスゴ)
	TLABH3081FCZZ	AD	DJ	N	C	Condition label(Spanish)	コンディションラベル (スペインゴ)
	TLABH3082FCZZ	AD	DJ	N	C	Condition label(Italian)	コンディションラベル (イタリアゴ)
	TLABH3203FCZZ	AD	DJ	N	C	Condition label(Dutch)	コンディションラベル (オランダゴ)

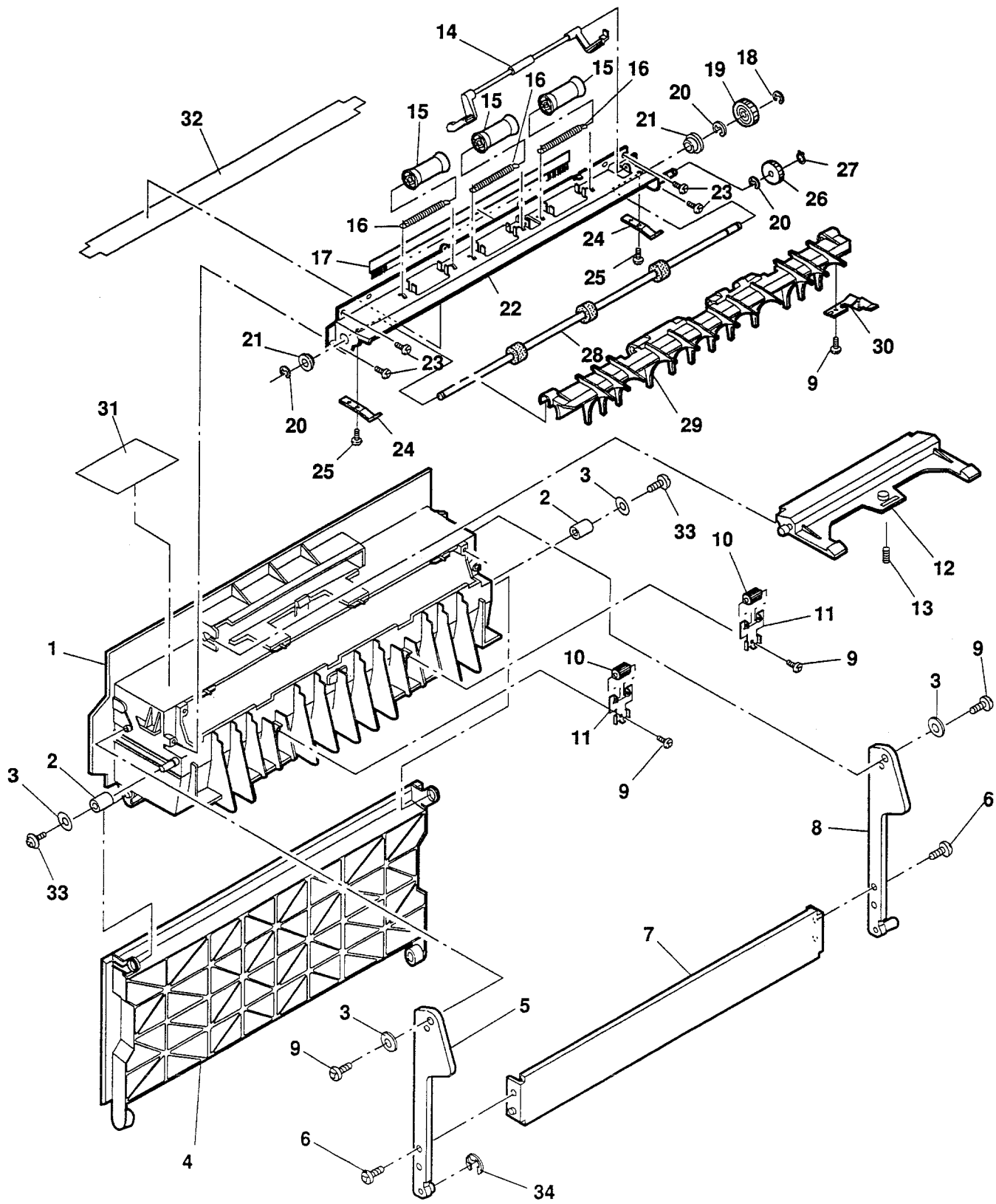


FCP00035

6 排紙反転ユニット(Paper exit reversing unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	GCAB-0752FCZZ	AZ	GD	N	D	Delivery exterior	ハイシキャビ B9
2	NBRGM1040HCZZ	AC	DJ		C	Bearing,platen	プラテン ベアリング
3	XWHSD30-05070	AA	DD		C	Washer	ワッシャ
4	GCAB-0753FCZZ	AU	FQ	N	D	Delivery exterior lower	ハイシキャビシタ B9
5	CPLTM4062FC01	AH	DX	N	C	Fulcrum plate F	シテンバン F
6	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
7	LSTYM0184FCZZ	AL	EG	N	C	Fulcrum plate stay	シテンバンステイ B9
8	CPLTM4062FC02	AH	DX	N	C	Fulcrum plate R	シテンバン R
9	XEPSD30P06000	AA	DD		C	Screw (3×6)	ビス(Pタイト)
10	PCLR-0301FCZZ	AB	DD		C	Collar	ジュウドウコロ
11	MSPRP1520FCZZ	AD	DJ		C	Spring	ジュウドウコロスプリング
12	PTME-0221FCZZ	AH	DX	N	C	Lock pawl	ロックツメ
13	MSPRP1950FCZZ	AA	DD	N	C	Lock spring	ロックバネ B9
14	MLEVP0606FCZZ	AH	DX	N	C	POD lever	PODアクチュエーター
15	NRÖLP0937FCZZ	AC	DJ	N	C	Delivery roller upper (Japan only)	ハイシローラーウエ
	NRÖLP0923FCZZ	AC	DD	N	C	Delivery roller upper (Export)	ハイシローラーウエ B9
16	MSPRC1973FCZZ	AA	DD	N	C	Delivery roller spring	ハイシローラースプリング
17	PBRSS0118FCZZ	AG	DX	N	C	Discharge brush	ジョデンブラシ
18	XRESP40-06000	AA	DD		C	E type ring	Eリング
19	NGERH0194FCZZ	AB	DD		C	LB drive gear (22T)	LBクドウギヤー
20	XRESP50-06000	AA	DD		C	E type ring	Eリング
21	NBRGC0069FCZZ	AB	DD		C	Bearing,pulley	プーリーベアリング
22	CGiDH1363FC01	AM	EG	N	C	Delivery paper guide	ハイシペーパーガイド
23	XEPSD40P08000	AA	DD		C	Screw (4×8)	ビス
24	LFiX-0440FCZZ	AB	DD	N	C	Upper pawl fixing plate	ウエツメオサエ B9
25	XBPSD30P04000	AA	DD		C	Screw (3×4)	ビス
26	NGERH0867FCZZ	AC	DD	N	C	Delivery gear 20T	ハイシデンタツギヤー20T
27	PRNGP0025FCZZ	AA	DD		C	V ring (GTW-5)	Vリング
28	NRÖLR0910FCZZ	AN	EG	N	C	Delivery roller	ハイシローラー B9
29	PGiDM1354FCZZ	AP	EQ	N	C	Gate guide	ハンテンゲート
30	LANGT1343FCZZ	AD	DJ	N	C	Gate angle	ゲートアングル B9
31	TCAUH0960FCZZ	AB	DD	N	C	High temperature caution label (Japan only)	コウオンチュウイラベル J
	TCAUH0961FCZZ	AB	DD	N	C	High temperature caution label (USA,Australia,U,Kingdom)	コウオンチュウイラベル U
	TCAUH0962FCZZ	AB	DD	N	C	High temperature caution label (Other countries)	コウオンチュウイラベル E4
32	PSHEP3239FCZZ	AE	DS	N	C	Delivery paper guide sheet (Japan only)	ハイシペーパーガイドマイラー
33	XEPSD30P08000	AA	DD		C	Screw (3×8)	ビス
34	XRESP50-06000	AA	DD		C	E type ring	Eリング

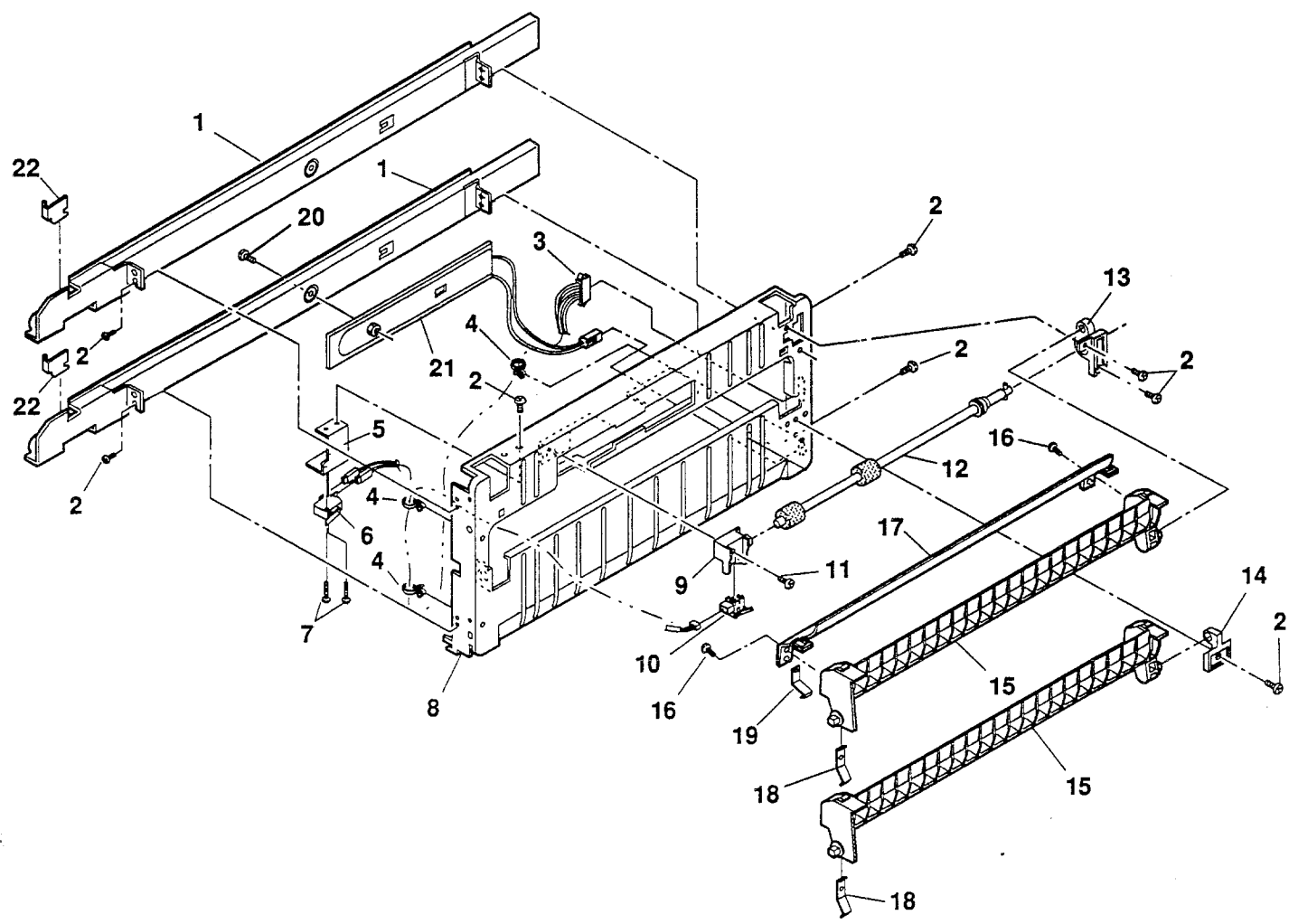
6 排紙反転ユニット(Paper exit reversing unit)



FCP00036

7 搬送ユニット(Transport unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	CRALM0096FC01	AR	EZ	N	C	Drawer rail R	ヒキダシレール R
2	XBBSD40P10000	AA	DD		C	Screw (4×10)	ビス
3	DHAi-2045FCZZ	AM	EG	N	C	Transport interface harness	ハンソウチュウケイハーネス
4	LBNDJ0043FCZZ	AA	DD		C	Snap band (SG-130)	スナップバンド
5	LPLTM4033FCZZ	AE	DJ	N	C	Guide switch fixing plate	ガイドSWトリツケイタ
6	QSW-M0319FCZZ	AG	DS		B	Door switch	ドアースイッチ
7	XBPSD30P14000	AA	DD		C	Screw (3×14)	ビス
8	PGiDH1356FCZZ	AV	FQ	N	C	Transport paper guide	ハンソウ ペーパーガイド
9	LHLDZ1082FCZZ	AC	DJ	N	C	Roller holder FB	ローラーホルダー FB
10	QSW-L0443FCZZ	AM	EG	N	B	Lead switch (PID1)	リードスイッチ
11	XBPSD40P18000	AA	DD		C	Screw (4×18)	ビス
12	CROLR0900FC01	AR	EZ	N	C	Transport roller	ハンソウローラー B9B
13	LHLDZ1080FCZZ	AC	DJ	N	C	U-turn paper guide holder U	Uターンペーパーガイドホルダー U
14	LHLDZ1081FCZZ	AC	DJ	N	C	U-turn paper guide holder L	Uターンペーパーガイドホルダー L
15	PGiDM1340FCZZ	AM	EG	N	C	U-turn paper guide A	Uターンペーパーガイド A
16	XEPSD40P08000	AA	DD		C	Screw (4×8)	ビス
17	PGiDH1357FCZZ	AH	DX	N	C	U-turn paper guide B	Uターンペーパーガイド B
18	MSPRT1939FCZZ	AB	DD	N	C	U-turn paper guide spring	Uターンペーパーガイドスプリング
19	QEARP0053FCZZ	AB	DD	N	C	U-turn paper guide earth plate	Uターンペーパーガイドアースイタ
20	LX-BZ0465FCZZ	AA	DD		C	Screw (SF2022H/SF2027H)	ビス
21	RHETP0056FCZZ	AW	FX	N	B	Dry heater 1 (SF2022H/SF2027H)	ジョシツヒーター 1
22	LSTPP0281FCZZ	AC	DD	N	C	Drawer stopper R	UNヒキダシストッパー Rショ



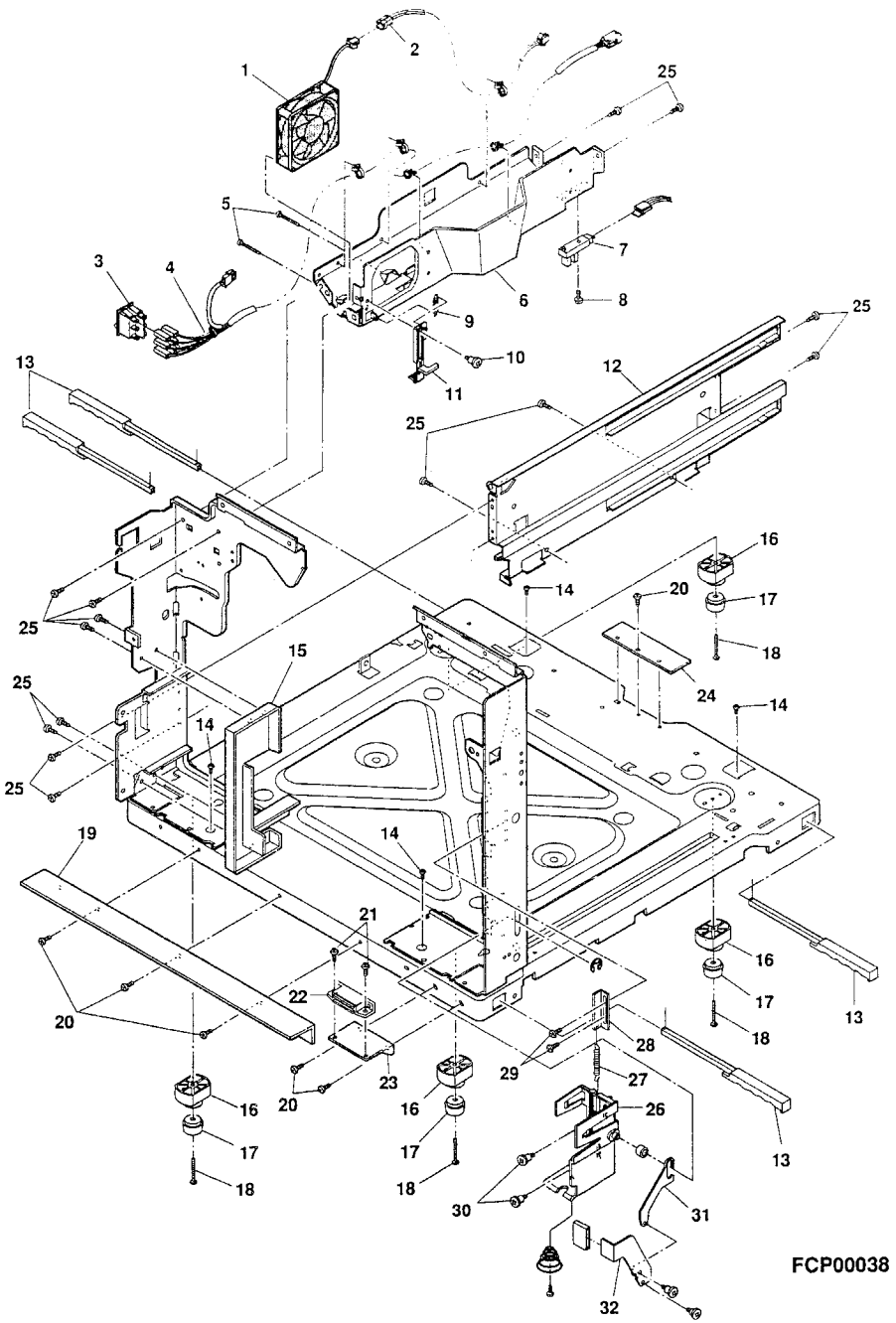
FCP00037

8 前フレーム(Front frame)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	RMOTE0630FCZZ	AW	FX		B	Main motor(cooling)	メインモーター(レイキャク)
2	DHAI-2048FCZZ	AF	DS	N	C	VFII interface harness	VFIIチュウケイハーネス
3	QSW-C1390QCZZ	AN	EQ	N	B	Switch	スイッチ
4	DHAI-2098FCZZ	AS	EZ	N	C	Main switch harness (SF-2022H/SF-2027H)	メインスイッチハーネスII
	DHAI-2059FCZZ	AR	EZ	N	C	Main switch harness	メインスイッチハーネス
5	XBPSD40P30000	AA	DD		C	Screw (4×30)	ビス
6	LDAIU0453FCZZ	AU	FQ	N	C	Fan fixing base	ファントリツケダイ
7	VHPGP1A22LC-1	AK	EB		B	Photo sensor (GP1A22LC)	フォトセンサー
8	XBPSD40P12000	AA	DD		C	Screw (4×12)	ビス
9	MSPRT1983FCZZ	AB	DD	N	C	Upper pawl lever spring	ウエツメレバースプリング
10	LX-BZ0669FCZZ	AC	DD	N	C	Screw	ビス
11	MLEVP0605FCZZ	AD	DJ	N	C	Upper pawl plate lever	ウエツメバンレバー
12	LRALM0095FCZZ	AX	FX	N	C	Drawer rain left	ヒキダシレールヒダリ
13	JHNDM0069FCZZ	AH	DX		C	Base plate handle	ダイバントッテ
14	LX-BZ0503FCZZ	AA	DD		C	Screw	ビス
15	CPLTM4179FC01	AN	EQ	N	C	F frame L sub plate	Fフレームしホキョウイタ
16	LPLTG2539FCZZ	AD	DJ		C	Rubber plate	ゴムイタ C7
17	PGUMS0182FCZZ	AC	DJ		C	Rubber foot	ゴムアシB7
18	LX-BZ0667FCZZ	AB	DD	N	C	Screw	ビス
19	LPLTM4115FCZZ	AK	EB	N	C	Front cover fixing plate	フロントカバートリツケイタ
20	XHBSD40P10000	AA	DD		C	Screw (4×10)	ビス
21	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
22	PMAGT0072FCZZ	AF	DS	N	C	Magnet catch	マグネットキャッチ
23	LPLTM4180FCZZ	AE	DS	N	C	MG catch fixing plate	MGキャッチトリツケイタ
24	PCOVP1143FCZZ	AE	DJ	N	C	Base plate cover	ダイバンカバー
25	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
26	LHLDZ1077FCZZ	AK	EB	N	C	Waste toner holder	ハイトナーホルダー
27	MSPRT1974FCZZ	AB	DD	N	C	Waste toner spring	ハイトナースプリング
28	LPLTM4116FCZZ	AC	DD	N	C	HT sp adjusting plate	HT SPチョウセイイタ
29	XBPSD40P08KS0	AA	DD		C	Screw (4×8KS)	ビス
30	LX-BZ0653FCZZ	AB	DD	N	C	Screw	ビス
31	MARMM0153FCZZ	AD	DJ	N	C	Toner box arm	ハイトナーボックスアーム
32	MLEVF0610FCZZ	AF	DS	N	C	Toner box lever	ハイトナーボックスカイショレバー

SF2027

8 前フレーム(Front frame)



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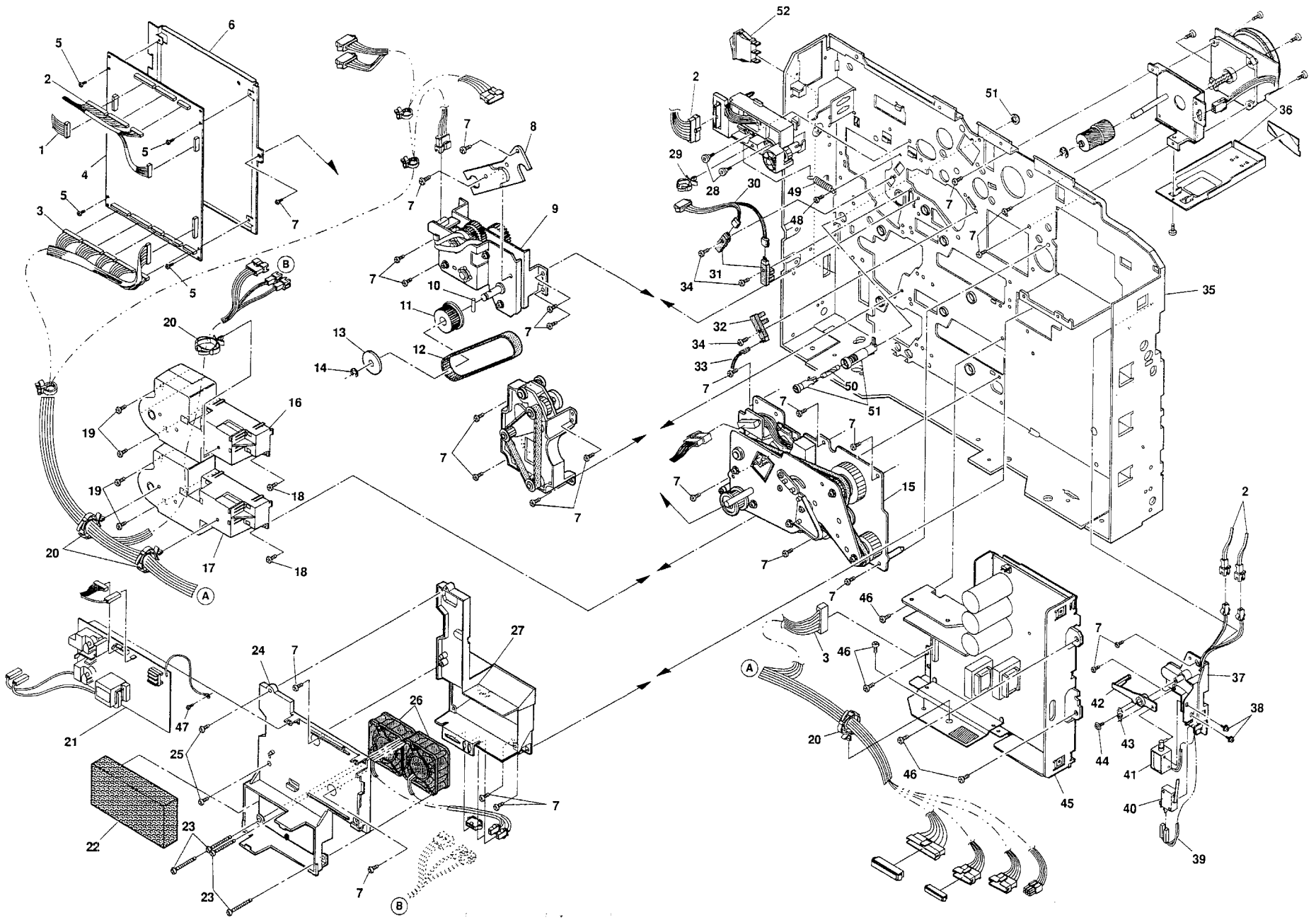
9 後フレーム(Rear frame)

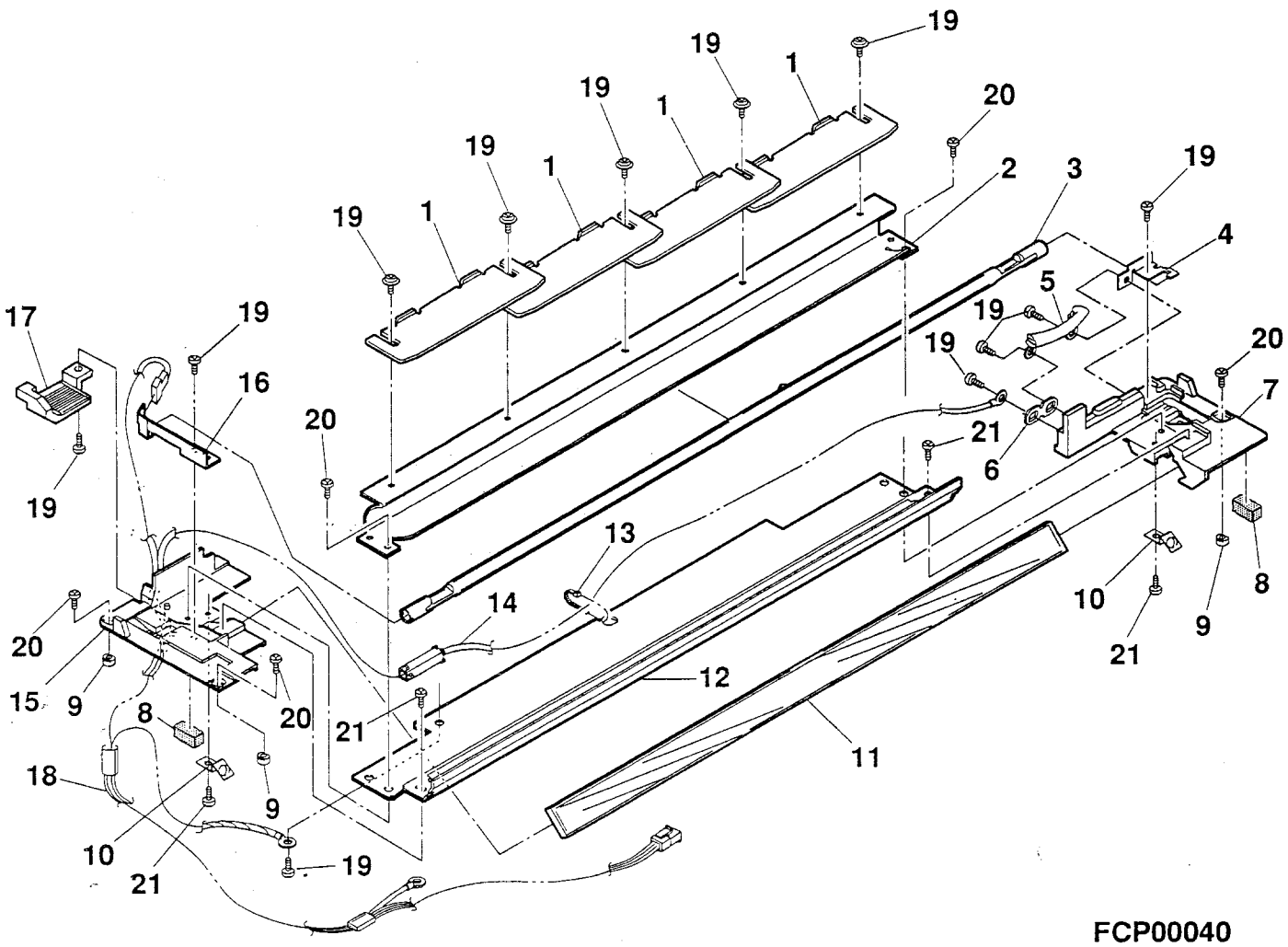


9 後フレーム(Rear frame)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	DHAi-2037FCZZ	AS	FG	N	C	Operation main harness	ソウサメインカンハーネス
2	DHAi-2041FCZZ	BG	HG	N	C	Optical main harness (SF-2022･･Japan only)(SF-2027)	コウガクメインハーネス
	DHAi-2040FCZZ	BF	HC	N	C	Optical main harness (Export) (SF-2022)	コウガクメインハーネス
3	DHAi-2044FCZZ	BL	LE	N	C	Lower unit main harness (SF-2022/SF-2027)	シタユニットメインハーネス
	DHAi-2099FCZZ	BM	LJ	N	C	Lower unit main harness H (SF-2022H/SF-2027H)	シタユニットメインハーネスH
4	CPWBN0928FC51	CD	UF	N	E	Main PWB	メインキバン
5	XBPSD40P06K00	AA	DD		C	Screw (4×6K)	ビス
6	LPLTM4030FCZZ	AM	EG	N	C	Main PWB fixing plate	メインキバントリツケイタ
7	XHBSD40P10000	AA	DD		C	Screw (4×10)	ビス
8	LPLTM4113FCZZ	AF	DS	N	C	Drive reinforce plate	クドウホキョウバン
9	CFRM-0740FC31	BK	HZ	N	E	Paper feed speed change frame unit	キュウシヘンソクフレームユニット
10	LPiNS0155FCZZ	AA	DD		C	Pin (φ3×10)	ヘイコウピン
11	NPLYZ0258FCZZ	AC	DJ	N	C	Pulley 30P-B	プーリー30P-B
12	NBLTH0182FCZZ	AH	DX	N	B	Drive belt B	クドウベルトB
13	PCLR-0367FCZZ	AC	DD	N	C	Pulley	プーリーカラー
14	XRESP70-08000	AA	DD		C	E type ring	E リング
15	DUNTM6560FCZZ	BP	MB	N	E	Main drive unit	メインクドウユニット
16	DUNTM6554FCZZ	BF	HG	N	E	Lift up unit	リフトアップユニット
17	DUNTM6554FCZZ	BF	HG	N	E	Lift up unit (Japan only)	リフトアップユニット
18	XBBSD40P10000	AA	DD		C	Screw (4×10)	ビス
19	XBBSD40P30000	AA	DD		C	Screw (4×30)	ビス
20	LHLDW1010FCZZ	AB	DD		C	Wire holder (X20-4.8)	ツイストバンド
⚠21	RTRNZ0468FCZZ	BU	RB	N	B	High voltage transformer	コウアツトランス
22	PFiLD0185FCZ1	AP	EQ	N	C	Ozone filter TC	オゾンフィルターTC
23	XEPSD40P35000	AA	DD		C	Screw (4×35)	ビス
24	PDUC-0056FCZZ	AK	EB	N	C	Suction duct upper	サクションダクト ウエ
25	XEPSD40P10000	AA	DD		C	Screw (4×10)	ビス
26	RMOTE0700FCZZ	AX	FX	N	B	Suction fan	サクションファンB9
27	PDUC-0057FCZZ	AL	EB	N	C	Suction duct lower	サクションダクト シタ
28	LX-BZ0414FCZZ	AB	DD		C	Screw	ビス
29	LHLDW1118FCZZ	AA	DD	N	C	Wire holder (X-6-4)	ツイストバンド
30	DHAi-2071FCZZ	AH	DX	N	C	PPD1.2 interface harness	PPD1.2チュウケイハーネス
31	VHPGP1A22LC-1	AK	EB		B	Photo sensor (GP1A22LC)	フォトセンサー
32	VHPGP3A38//-1	AH	DX		B	Photo transistor (GP3A38)	フォトトランジスター
33	DHAi-2070FCZZ	AK	EB	N	C	PSD interface harness	PSDチュウケイハーネス
34	XBPSD40P10000	AA	DD		C	Screw (4×10)	ビス
35	LFRM-0736FCZZ	BG	HG	N	C	Rear frame	ウシロフレーム
36	RMOTP0694FCZZ	BS	NE	N	B	Main motor	メインモーターB9
37	LPLTM4029FCZZ	AG	DS	N	C	Solenoid fixing plate	ソレノイドトリツケイタ
38	XBPSD30P06KS0	AA	DD		C	Screw (3×6KS)	ビス
39	DHAi-2072FCZZ	AE	DS	N	C	Cassette switch L interface harness	C SW Lチュウケイハーネス
⚠40	QSW-M0319FCZZ	AG	DS		B	Door switch (100V series)	ドアースイッチ
⚠40	QSW-M0372FCZZ	AH	DX		B	Door switch (200V series)	ドアースイッチ
41	RPLU-0241FCZZ	AM	EG		C	R solenoid	Rソレノイド
42	MLEVP0582FCZZ	AC	DJ	N	C	Solenoid lever	ソレノイドレバー
43	MSPRT2008FCZZ	AA	DD	N	C	Lever spring	レバーフッキスプリング
44	XEPSD30P08X00	AA	DD		C	Screw (3×8X)	ビス
⚠45	CPWBF0939FC31	CD	UF	N	E	DC power supply PWB (100V series)	DCデンゲンキバン100
⚠45	CPWBF0944FC31	CE	UK	N	E	DC power supply PWB (200V series)	DCデンゲンキバン200
46	XHPSD40P04000	AA	DD		C	Screw (4×4)	ビス
47	XBPBZ40P06K00	AA	DD		C	Screw (4×6K)	ビス
48	LX-BZ0659FCZZ	AB	DD		C	Screw	ビス
49	MSPRT0925FCZZ	AB	DD		C	PF jum release spring	PFジャムカイジョスプリング
⚠50	QFS-D2002WCZZ	AB	DD		A	Fuse (SF-2022H/SF-2027H)	ヒューズ
51	QFSHB0023FCZZ	AK	EB	N	C	Fuse holder (SF-2022H/SF-2027H)	ヒューズホルダー
52	QSW-C1060QCZZ	AT	FG	N	B	Switch (SF-2022H/SF-2027H)	スイッチ

10 コピーランプユニット(Copy lamp unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPLTM4124FCZZ	AC	DJ	N	C	Control plate	チョウコウバン
2	PREFL0145FCZZ	AT	FG	N	C	Main reflector	リフレクターB9
⚠ 3	RLMPU0334FCZZ	AZ	GJ		B	Copy lamp (100V series)	コピーランプ
⚠	RLMPU0335FCZZ	AZ	GJ		B	Copy lamp (200V series)	コピーランプ
4	MSPRP1976FCZZ	AD	DJ	N	C	Lamp spring F	ランプバネF B9
⚠ 5	CFS-T0095FC31	AK	EB	N	E	Temperature fuse	オンドヒューズB9
6	LPLTM4123FCZZ	AB	DD	N	C	Terminal plate	タンシバン B9
7	LPLTP4121FCZZ	AN	EG	N	C	Side plate F	ソクバンF B9
8	PCUSU0203FCZZ	AE	DS		C	Cushion	ボウシンクッション
9	CSLi-0103FC31	AF	DS		E	Slider (4pcs/set)	スベリザイ(X4)
10	MSPRP1591FCZZ	AC	DD		B	Mirror spring	ミラーバネ
11	PMiR-0076FCZZ	AP	EQ		B	1st mirror	ダイ1ミラー
12	CDAiU0459FC01	AP	EQ	N	C	Base plate	キダイ
13	LBNDJ0013FCZZ	AA	DD		C	Wire fixing band	ケッソクバンド
14	DHAi-2067FCZZ	AV	FQ	N	C	Optical harness	コウガクハーネスB9
15	LPLTP4122FCZZ	AN	EG	N	C	Side plate R	ソクバンR B9
16	MSPRP1977FCZZ	AG	DS	N	C	Lamp spring R	ランプバネR B9
17	LFiX-0445FCZZ	AD	DJ	N	C	Harness fixing plate	ハーネスオサエ B9
18	DHAi-2068FCZZ	AF	DS	N	C	CL lead harness	CLリードハーネス
19	XHBSD30P08000	AA	DD		C	Screw (3×8)	ビス
20	XEBSD40P08000	AA	DD		C	Screw (4×8)	ビス
21	XEBSD30P06000	AA	DD		C	Screw (3×6)	ビス
	ユニット (Unit)						
901	CREFL0145FC31	BN	LP	N	E	Copy lamp unit (100V series)	コピーランプユニット
	CREFL0145FC32	BN	LP	N	E	Copy lamp unit (200V series)	コピーランプユニット



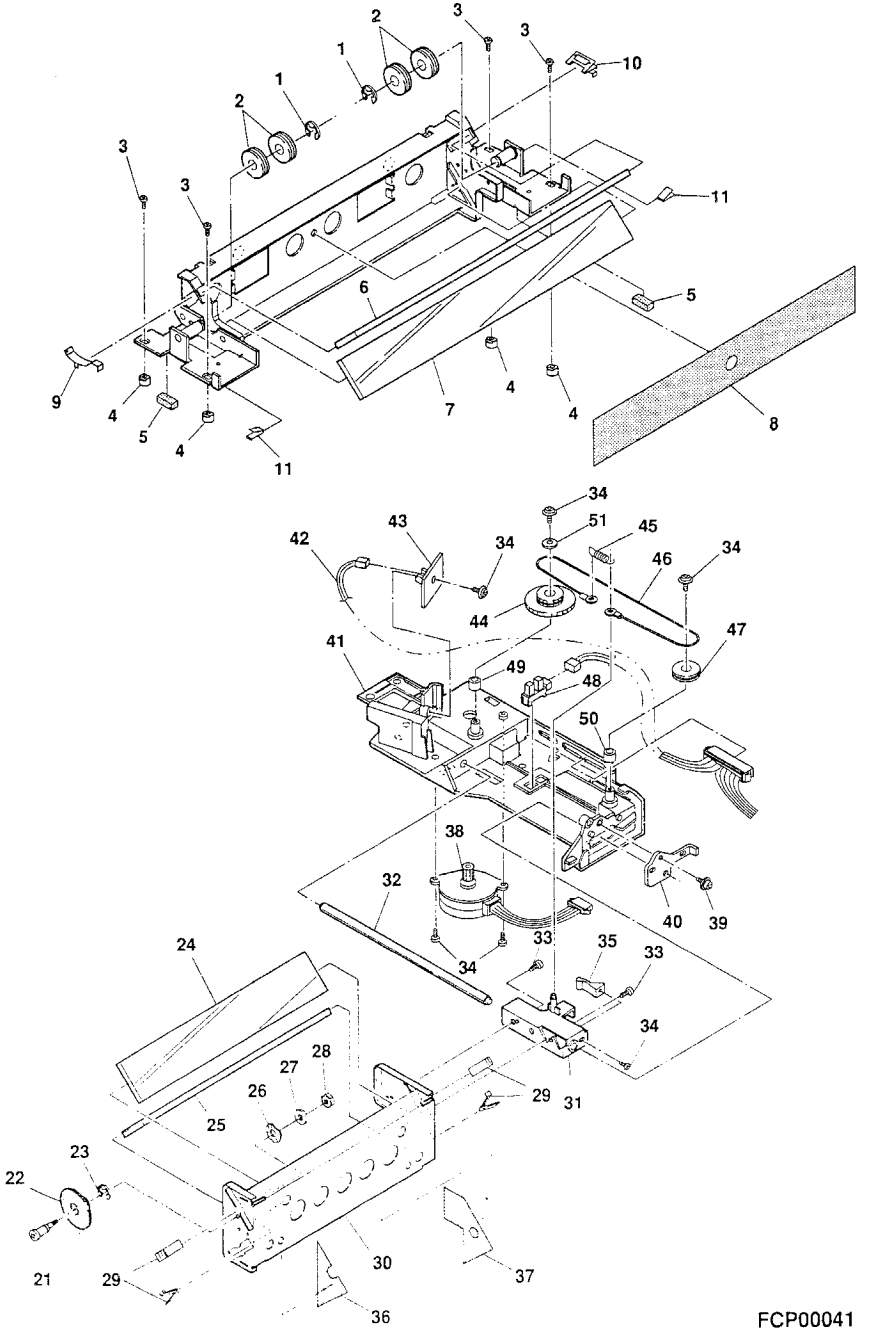
FCP00040

1 第2,3,4,5ミラーホルダーユニット(Mirror holder unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP70-08000	AA	DD		C	E type ring	Eリング
2	NPLYZ0167FCZZ	AF	DS		C	Pulley	プーリー
3	LX-BZ0339FCZZ	AA	DD		C	Screw	ビス
4	CSLi-0103FC31	AF	DS		E	Slider (4pcs/set)	スベリザイ(X4)
5	PCUSS0201FCZZ	AA	DD		C	MB-B cushion	MB-Bヨウクッション
6	PMiR-0100FCZZ	AU	FQ	N	B	2nd mirror	ダイ2ミラー B9
7	PMiR-0101FCZZ	AZ	GD	N	B	3nd mirror	ダイ3ミラー B9
8	PSHEZ3184FCZZ	AD	DJ	N	C	2,3 Mirror holder sheet	ダイ2,3ミラーホルダーシート
9	LFiX-0438FCZZ	AD	DJ	N	C	Mirror fixing plate F	ミラーオサエF B9
10	LFiX-0439FCZZ	AC	DD	N	C	Mirror fixing plate R	ミラーオサエR B9
11	LFiX-0284FCZZ	AC	DD		C	4th 5th mirror holder F	ダイ4,5ミラーオサエ F
21	LX-BZ0654FCZZ	AG	DS	N	C	Screw	ビス
22	PCLR-0374FCZZ	AC	DD	N	C	4th 5th mirror collar	4,5ミラーコロB9
23	XRESP70-08000	AA	DD		C	E type ring	Eリング
24	PMiR-0102FCZZ	AX	FX	N	B	4th mirror	ダイ4ミラー B9
25	PMiR-0103FCZZ	AR	EZ	N	B	5th mirror	ダイ5ミラー B9
26	LX-WZ0050FCZZ	AA	DD		C	Washer	ナミワッシャ
27	LX-WZ0134FCZZ	AA	DD		C	Washer	ワッシャ
28	XNESD40-32000	AA	DD		C	Nut	ナット
29	LFiX-0284FCZZ	AC	DD		C	4th 5th mirror holder F	ダイ4,5ミラーオサエ F
30	LHLDZ1100FCZZ	AQ	EZ	N	C	4th 5th mirror holder	4/5ミラーホルダーB9
31	LHLDZ1087FCZZ	AH	DX	N	C	4th 5th drive holder	4/5クドウホルダーB9
32	NSFTZ1762FCZZ	AF	DS	N	C	4th 5th drive shaft	4/5クドウジク
33	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
34	XEPSD30P05000	AA	DD		C	Screw (3×5)	ビス
35	MSPRT0842FCZZ	AC	DD		C	Cassette guide spring	カセットガイド スプリング
36	PSHEZ3133FCZZ	AB	DD	N	C	4th 5th shield sheet F	4/5シャコウシートF
37	PSHEZ3134FCZZ	AC	DD	N	C	4th 5th shield sheet R	4/5シャコウシートR
38	RMOTP0697FCZZ	AV	FQ	N	B	Mirror base motor	ミラーベースモーター
39	LX-BZ0335FCZZ	AA	DD		C	Screw (4×6)(Red)	ビス
40	LPLTM4051FCZZ	AB	DD	N	C	4th,5th drive adjusting plate	4/5クドウチョウセイイタ
41	LPLTP4024FCZZ	AN	EQ	N	C	4th 5th motor fixing plate	4/5モートリツケイタ
42	DHAi-2039FCZZ	AU	FQ	N	C	Optical harness (SF-2022-Japan only)(SF-2027)	コウガクナイブハーネス
	DHAi-2038FCZZ	AU	FQ	N	C	Optical harness (SF-2022-Export)	コウガクナイブハーネス
43	CPWBF0941FC31	AS	FG	N	E	AE sensor PWB	AEセンサーキバン
44	NPLYZ0262FCZZ	AF	DS	N	C	Lens drive pullry	レンズクドウプーリー
45	MSPRC1289FCZZ	AA	DD		C	Drive wire spring	クドウワイヤースプリング
46	PWiR-0146FCZZ	AK	EB	N	C	Mirror drive wire	ミラークドウワイヤー
47	NPLYZ0263FCZZ	AB	DD	N	C	S idle pulley	Sアイドルプーリー
48	VHPGP1A71A1-1	AG	DX		B	Photo transistor (GP1A71A1)	フォトトランジスター
49	NBRGC0455FCZZ	AC	DD	N	C	4th 5th drive hold bearing(large)	4/5クドウウケベアリング(ダイ)
50	NBRGC0456FCZZ	AB	DD	N	C	4th 5th drive hold bearing(small)	4/5クドウウケベアリング(ショウ)
51	LX-WZ0213FCZZ	AA	DD		C	Washer	ワッシャ

SF2027

11 第2,3,4,5ミラーホルダーユニット(Mirror holder unit)



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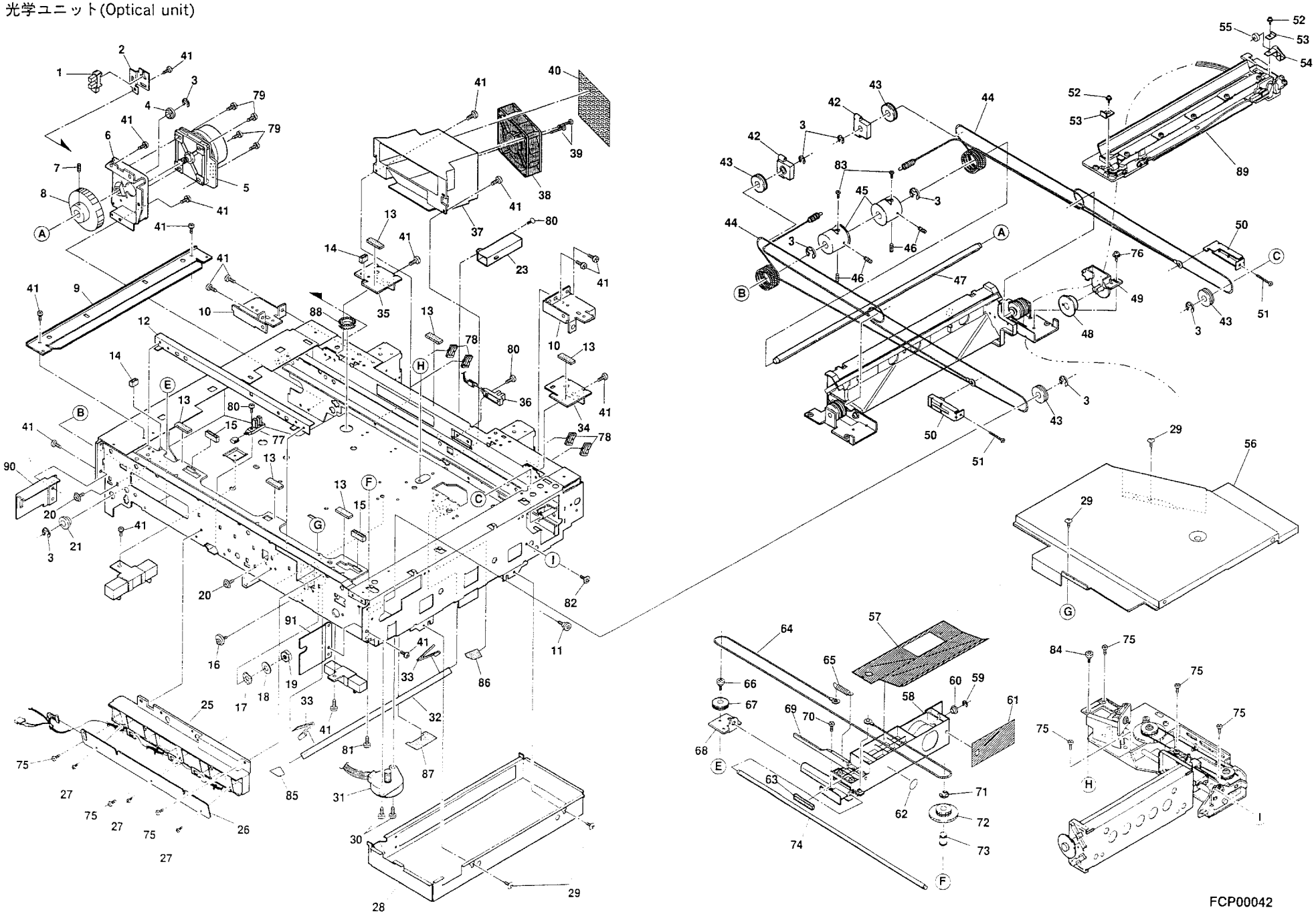
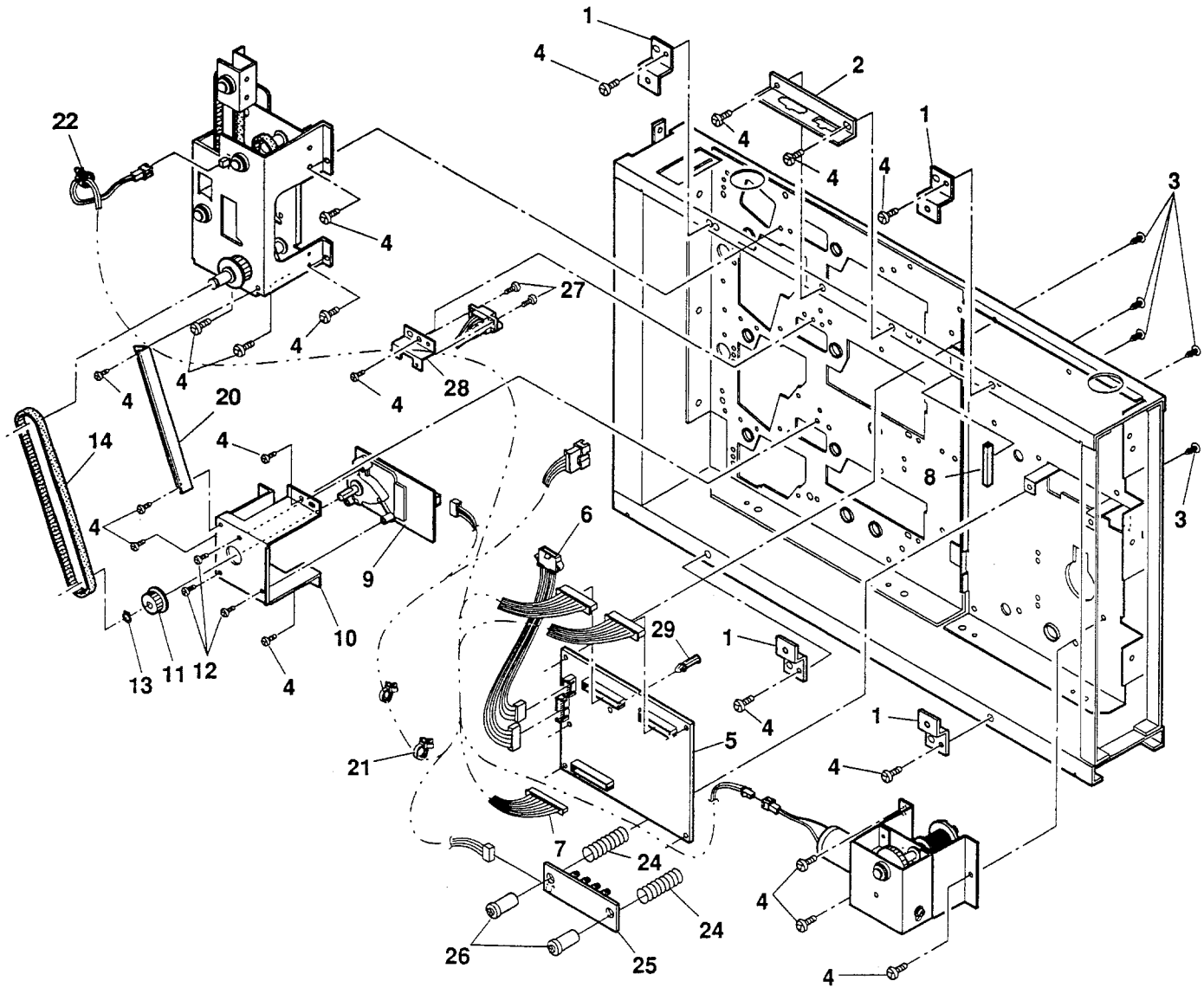
12 光学ユニット(Optical unit)



FCP00042

61 SF-D21‥デスク後フレーム(SF-D21‥Desk rear frame)



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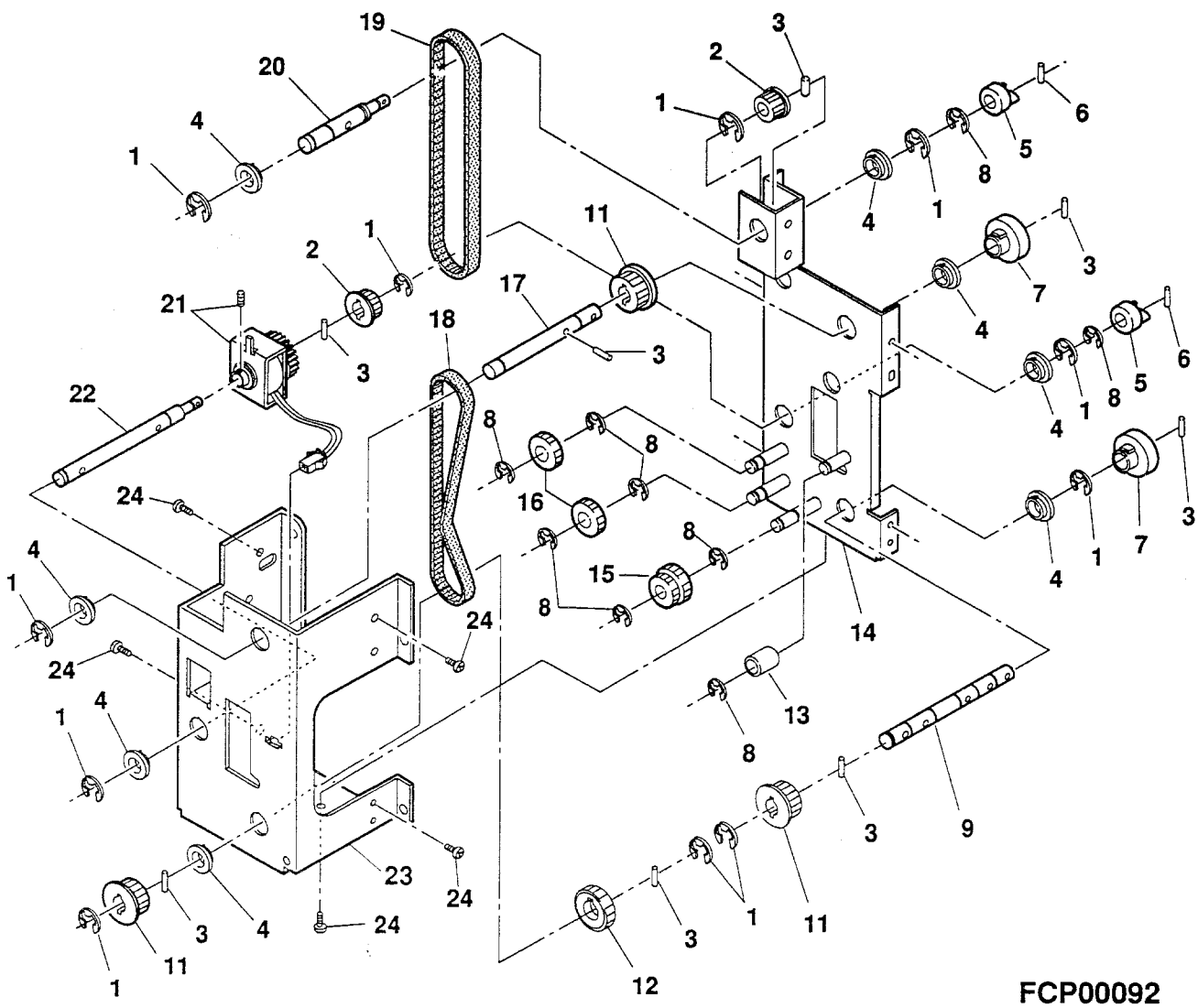
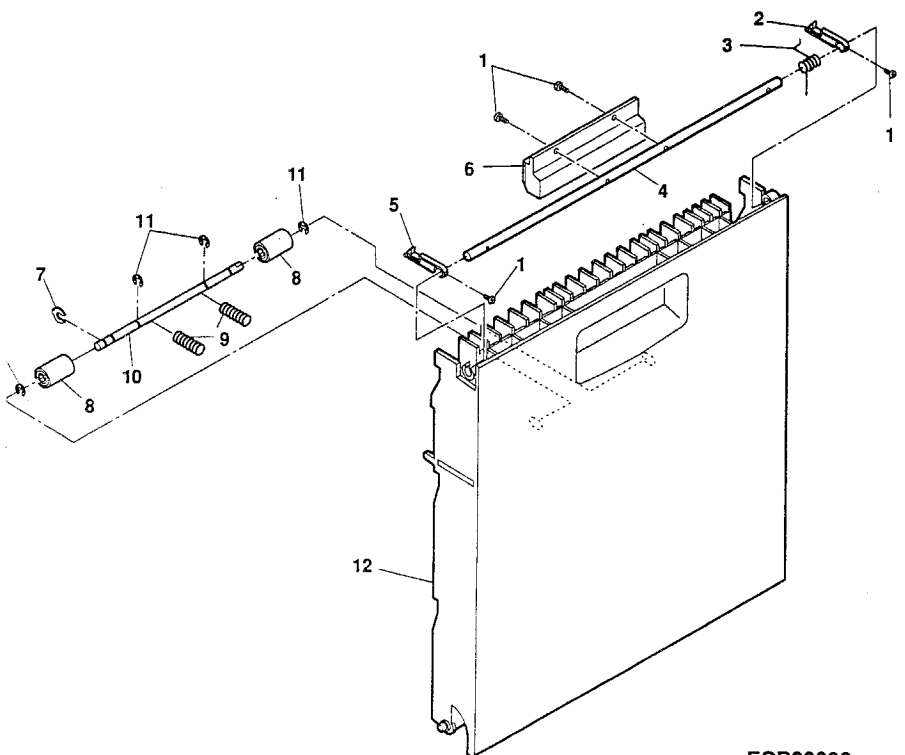
62 SF-D21・・デスク駆動ボックス上ユニット(SF-D21・・Desk drive box upper unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP70-08000	AA	DD		C	E type ring	E リング
2	NPLYZ0265FCZZ	AC	DD	N	C	Transport pulley	ハンソウプーリー
3	LPiNS0075FCZZ	AB	DD		C	Pin (φ3-10)	ヘンコウピン
4	NBRGC2019SCZZ	AC	DJ		B	Bearing (φ8)	ベアリング
5	NCPL-0014FCZZ	AC	DJ	N	C	Transport cup ring	ハンソウカップリング
6	LPiNS0134FCZZ	AB	DD		C	Pin (φ2-12)	ヘイコウピン
7	NCPL-0013FCZZ	AC	DD	N	C	Paper feeding cup ring	キュウシカップリング
8	XRESP50-06000	AA	DD		C	E type ring	Eリング
9	NSFTZ1786FCZZ	AL	EG	N	C	25 Pulley shaft center	25プーリジク ナカ
11	NPLYZ0266FCZZ	AC	DJ	N	C	Paper feeding joint pulley	キュウシレンケツプーリー
12	NGERH0457FCZZ	AC	DD		C	DV drive gear R	DVクドウギヤー R
13	NROLP0916FCZZ	AB	DD	N	C	Paper feeding belt guide roller	キュシベルトガイドローラー
14	CPLTM4078FC01	AQ	EZ	N	C	Drive box A	クドウボックスA
15	NGERH0869FCZZ	AC	DD	N	C	22/20T gear	22/20Tギヤー
16	NGERH0870FCZZ	AC	DD	N	C	18T gear	18Tギヤ
17	NSFTZ1785FCZZ	AH	DX	N	C	25 Pulley shaft upper	25プーリジク ウエ
18	NBLTH0193FCZZ	AH	DX	N	B	Belt (S3M300)	ベルト(S3M300)
19	NBLTH0192FCZZ	AH	DX	N	B	Belt (S2M285)	ベルト(S2M285)
20	NSFTZ1782FCZZ	AB	DD	N	C	16 Pulley shaft upper	16プーリジク ウエ
21	PCLC-0210FCZZ	AW	FQ	N	C	Transport clutch	ハンソウクラッチ
22	NSFTZ1781FCZZ	AL	EB	N	C	16 Pulley shaft center	16プーリジク ナカ
23	LPLTM4079FCZZ	AP	EQ	N	C	Drive box B	クドウボックス B
24	XHPSD40P10000	AA	DD		C	Screw (4×10)	ビス



SF-D21‥デスク搬送ガイドユニット(SF-D21‥Desk transport guide unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION
1	XBBSD30P06000	AA	DD		C	Screw (3×6) ビス
2	MLEVP0608FCZZ	AE	DJ	N	C	Guide lock lever R ガイドロックレバーR
3	MSPRD1949FCZZ	AB	DD	N	C	Guide lock release spring ガイドロックカイジョスプリング
4	NSFTZ1735FCZZ	AN	EG	N	C	Guide lock release shaft ガイドロックカイジョジク
5	MLEVP0598FCZZ	AE	DJ	N	C	Guide lock lever ガイドロックレバー
6	MLEVP0595FCZZ	AF	DS	N	C	Guide lock release lever ガイドロックカイジョレバー
7	LSTPP0279FCZZ	AB	DD	N	C	Stopper ストッパー
8	NROLP0896FCZZ	AC	DD	N	C	Transport roller ハンソウジュウドウローラー
9	MSPRC1948FCZZ	AB	DD	N	C	Roller pressure spring ローラーアツセツスプリング
10	NSFTZ1775FCZZ	AK	EB	N	C	Transport shaft ハンソウジュウドウジク
11	XRESP50-06000	AA	DD		C	E type ring Eリング
12	PGIDM1365FCZZ	BC	GT	N	C	Transport guide ハンソウガイド



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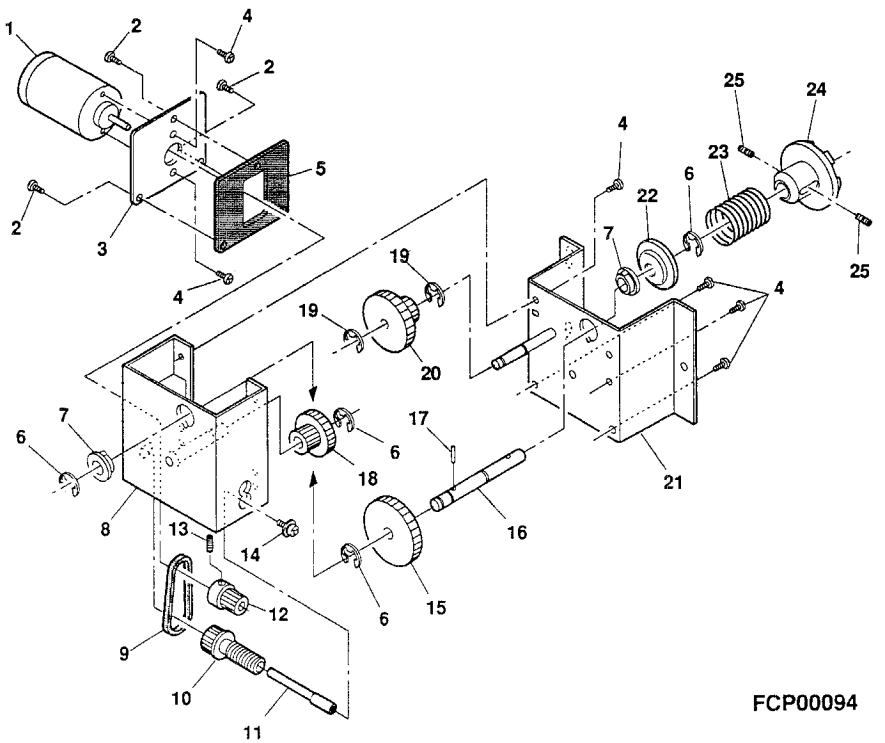
64 SF-D21‥デスク駆動ユニット(SF-D21‥Desk drive unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION
1	RMOTV0693FCZZ	BB	GN	N	B	Lift motor (SF-D21) リフトモーター
2	XBBSD30P06000	AA	DD		C	Screw (3×6) (SF-D21) ビス
3	LPLTM4098FCZZ	AD	DJ	N	C	Motor fixing plate B (SF-D21) モータートリツケバン B
4	XBBSD30P04000	AA	DD		C	Screw (3×4) (SF-D21) ビス
5	PSPAZ0593FCZZ	AD	DJ	N	C	Motor spacer (SF-D21) モータースペーサー LCC
6	XRESP60-08000	AA	DD		C	E type ring (SF-D21) Eリング
7	NBRGC2019SCZZ	AC	DJ		C	Bearing (SF-D21) ベアリング
8	CPLTM4099FC01	AM	EG	N	C	Lift motor fixing plate (SF-D21) リフトモータートリツケイタ
9	NBLTH0197FCZZ	AF	DS	N	B	Belt (MXL52 6.4) (SF-D21) ベルト
10	NGERW0873FCZZ	AE	DJ	N	C	Worm gear (SF-D21) ウォームギヤー
11	NSFTZ1794FCZZ	AL	EB	N	C	Worm gear shaft (SF-D21) ウォームギヤーシャフト
12	NPLYZ0269FCZZ	AH	DX	N	C	Motor pulley (SF-D21) モータープーリー
13	XXXSP30L04000	AA	DD		C	Screw (3×4) (SF-D21) ビス
14	XBPSD30P08KS0	AA	DD		C	Screw (3×8KS) (SF-D21) ビス
15	NGERH0876FCZZ	AC	DJ	N	C	Gear 35T (SF-D21) ギヤ 35T
16	NSFTZ1797FCZZ	AK	EB	N	C	Gear shaft for 35T gear (SF-D21) ギヤーシャフト(35Tヨウ)
17	LPINS0096FCZZ	AB	DD		C	Pin (3×12) (SF-D21) 2ダンギヤーピン
18	NGERW0874FCZZ	AE	DS	N	C	Worm wheel gear (SF-D21) ウォームホイール
19	XRESP40-06000	AA	DD		C	E type ring (SF-D21) Eリング
20	NGERH0875FCZZ	AC	DJ	N	C	Gear 16/18T (SF-D21) ギヤ 16/18T
21	CPLTM4100FC01	AH	DX	N	C	Lift motor sub plate (SF-D21) リフトモーターホジョイタ
22	PSPAZ0095FCZZ	AB	DD		C	Clutch spacer (SF-D21) クラッチスペーサー
23	MSPRC1964FCZZ	AC	DD	N	C	Cup ring spring (SF-D21) カップリングスプリング
24	NCPL-0015FCZZ	AE	DJ	N	C	Hopper drive cup ring (SF-D21) ホッパークドウカップリング
25	XXXSP30L08000	AB	DD		C	Screw (3×8) (SF-D21) ビス



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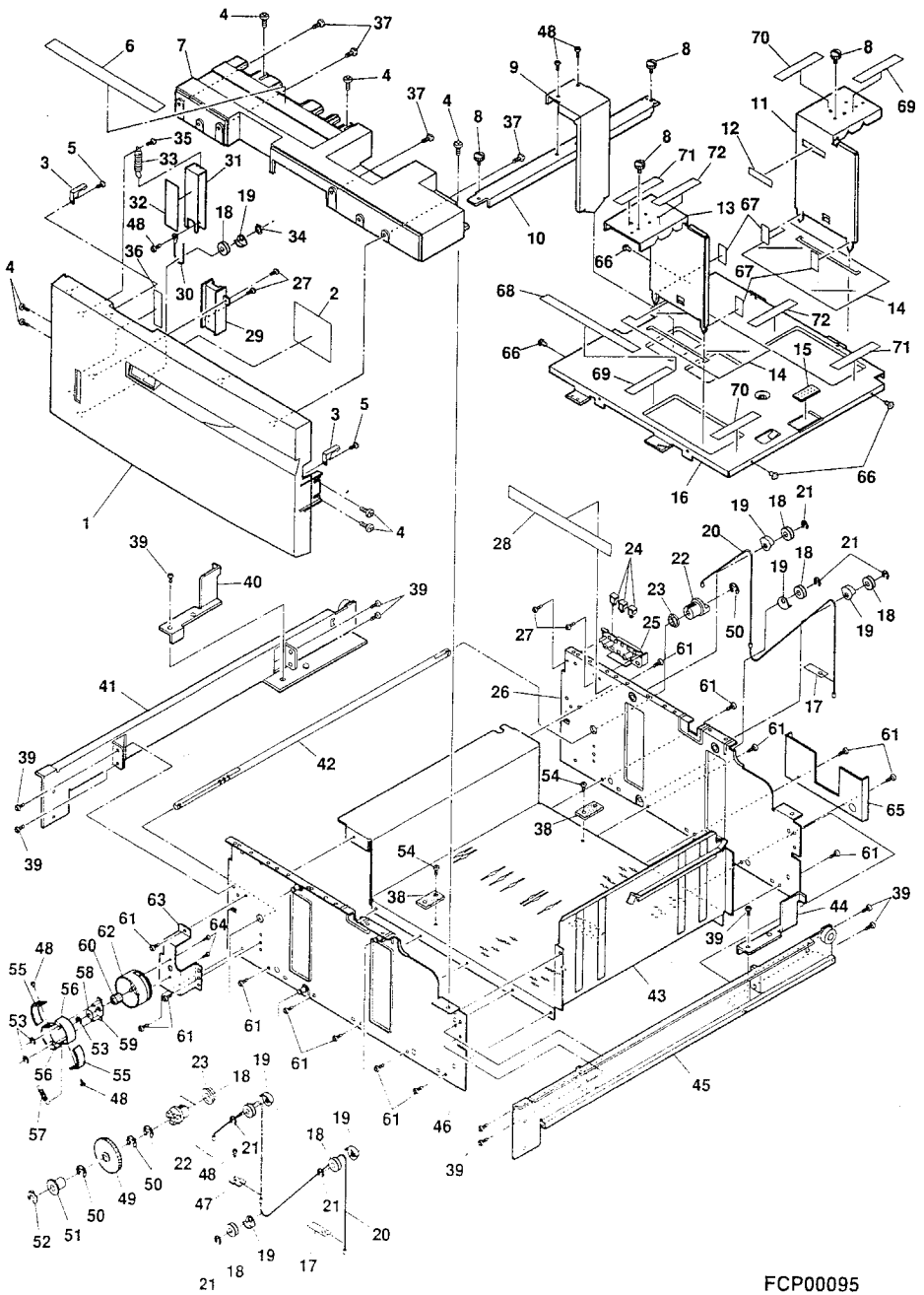
65 SF-D21‥デスクLCC外装(SF-D21‥Desk LCC exteriors)



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SF2027

65 SF-D21‥デスクLCC外装(SF-D21‥Desk LCC exteriors)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	GCAB-0760FCZZ	BA	GJ	N	D	Handle exterier	(SF-D21) LCCトッテガイソウ
2	LPLTP4070FCZ3	AK	EB	N	C	Size display label (Japan only)	(SF-D21) サイズヒョウジラベル LCC AB
	LPLTP4070FCZ7	AK	EB	N	C	Size display label (Export‥AB series)	(SF-D21) サイズヒョウジラベル
	LPLTP4070FCZ4	AK	EB	N	C	Size display label (Inch series)	(SF-D21) サイズヒョウジラベル LCC IN
3	PTME-0223FCZZ	AD	DJ	N	C	Cassette lock pawl	(SF-D21) カセットロックツメ
4	XBPSD40P10KS0	AA	DD		C	Screw (4×10KS)	(SF-D21) ビス
5	XEBSD40P10000	AA	DD		C	Screw (4×10)	(SF-D21) ビス
6	TLABZ3190FCZZ	AD	DJ	N	C	Size label AB-I (Japan only)	(SF-D21) サイズラベル AB-I
	TLABZ3141FCZZ	AD	DJ	N	C	Size label IN-E (Inch Series)	(SF-D21) サイズラベル IN-E
	TLABZ3191FCZZ	AD	DJ	N	C	Size label AB-J (Export‥AB series)	(SF-D21) サイズラベル AB-J
7	PCOVP1137FCZZ	AV	FQ	N	C	Handle cover	(SF-D21) トッテカバー
8	LX-BZ0658FCZZ	AC	DD	N	C	Screw	(SF-D21) ビス
9	LPLTM4089FCZZ	AL	EB	N	C	Rear plate	(SF-D21) コウタンバン
10	LFiX-0444FCZZ	AK	EB	N	C	Rear plate fixing plate	(SF-D21) コウタンバンオサエ
11	LPLTM4091FCZZ	AM	EG	N	C	Regulation plate R	(SF-D21) キセイバン R
12	TLABZ2253FCG7	AB	DD		C	Indication label G	(SF-D21) シジセンラベル G
13	LPLTM4090FCZZ	AM	EG	N	C	Regulation plate F	(SF-D21) キセイバン F
14	PSHEP3140FCZZ	AE	DS	N	C	Regulation plate sheet	(SF-D21) キセイバンシート
15	PSHEZ3138FCZZ	AC	DD	N	C	Paper fixing tray sheet	(SF-D21) キュウシダイ クラリーノ
16	LDAiU0456FCZZ	AX	FX	N	C	Paper feeding base	(SF-D21) キュウシダイ
17	PSHEP3174FCZZ	AB	DD	N	C	Paper feeding base sheet	(SF-D21) キュウシダイシート
18	NPLYZ0267FCZZ	AC	DD	N	C	Wire pulley	(SF-D21) ワイヤープーリー
19	PCOVP1136FCZZ	AV	FQ	N	C	Wier pulley cover	(SF-D21) ワイヤープーリーカバー
20	PWiR-0148FCZZ	AS	FG	N	C	Winder wire	(SF-D21) マキトリワイヤー
21	XRESP70-08000	AA	DD		C	E type ring	(SF-D21) Eリング
22	NPLYZ0268FCZZ	AC	DJ	N	C	Winder pulley	(SF-D21) マキトリプーリー
23	NBRGC2019SCZZ	AC	DJ		C	Bearing	(SF-D21) ベアリング
24	LDAiU0449FCZZ	AC	DJ	N	C	Size detector block	(SF-D21) サイズケンチブロック
25	LPLTP4092FCZZ	AF	DS	N	C	Paper size plate	(SF-D21) サイズバン
26	CPLTM4086FC01	AX	FX	N	D	Bottom plate R	(SF-D21) ソコイタ R
27	XEBSD30P08000	AA	DD		C	Screw (3×8)	ビス
28	TLABZ3188FCZZ	AD	DJ	N	C	Size label AB-G (Japan only)	(SF-D21) サイズラベル AB-G
	TLABZ3189FCZZ	AD	DJ	N	C	Size label AB-H (Export‥AB series)	(SF-D21) サイズラベル AB-H
	TLABZ3140FCZZ	AD	DJ	N	C	Size label IN-D (Inch Series)	(SF-D21) サイズラベル IN-D
29	LPLTP4093FCZZ	AE	DS	N	C	Fixing plate	(SF-D21) コテイプレート
30	PWiR-0149FCZZ	AL	EG	N	C	Wire	(SF-D21) ザンリョウヒョウジワイヤー
31	LPLTP4088FCZZ	AG	DX	N	C	Moving plate	(SF-D21) カドウプレート
32	PSHEZ3192FCZZ	AC	DD	N	C	Sheet	(SF-D21) ザンリョウヨウシート
33	MSPRT1961FCZZ	AB	DD	N	C	Spring	(SF-D21) ザンリョウヨウスプリング
34	LX-WZ0077FCZZ	AA	DD		C	Washer	(SF-D21) ワッシャ
35	XEPSD30P08X00	AA	DD		C	Screw (4×8X)	(SF-D21) ビス
36	PSHEP3139FCZZ	AE	DJ	N	C	Display sheet	(SF-D21) ザンリョウヒョウジシート
37	XEBSD40P12000	AA	DD		C	Screw (4×12)	ビス
38	PGUMS0227FCZZ	AB	DD	N	C	Rubber	(SF-D21) ボウジンゴム
39	LX-BZ0180FCZZ	AA	DD		C	Screw	(SF-D21) ビス
40	LSTPF0284FCZZ	AF	DS	N	C	Drawer stopper L	(SF-D21) ヒキダンストッパー L
41	CRALM0107FC01	AW	FQ	N	C	1000 cassette rail L	(SF-D21) 1000カセットレール L
42	NSFTZ1791FCZZ	AV	FQ	N	C	Winder shaft	(SF-D21) マキトリシャフト
43	CPLTM4085FC01	BA	GJ	N	D	Bottom plate bottom	(SF-D21) ソコイタ ソコ
44	LSTPF0283FCZZ	AF	DS	N	C	Drawer stopper R	(SF-D21) ヒキダンストッパー R
45	CRALM0108FC01	AW	FQ	N	C	1000 cassette rail R	(SF-D21) 1000カセットレール R
46	CPLTM4087FC01	AX	FX	N	D	Bottom plate F	(SF-D21) ソコイタ F
47	LFiX-0443FCZZ	AB	DD	N	C	Wire fixing plate	(SF-D21) ワイヤーオサエ
48	XBBSD30P06000	AA	DD		C	Screw (3×6)	(SF-D21) ビス
49	NGERH0872FCZZ	AP	EQ	N	C	Gear 60	(SF-D21) ギヤ 60
50	XRESP60-08000	AA	DD		C	E type ring	(SF-D21) Eリング
51	NPLYZ0272FCZZ	AD	DJ	N	C	Pulley	(SF-D21) ザンリョウプーリー
52	LSTPP0279FCZZ	AB	DD	N	C	Stopper	(SF-D21) ストッパー
53	XRESP30-05000	AA	DD		C	E type ring	(SF-D21) Eリング
54	LX-BZ3006SC0M	AA	DD		C	Screw (3×6)	(SF-D21) ビス
55	PBRKS0046FCZZ	AC	DD	N	C	Brake	(SF-D21) ブレーキ
56	LPLTM4096FCZZ	AD	DJ	N	C	Centrifugal plate	(SF-D21) エンシンバン
57	MSPRT1962FCZZ	AB	DD	N	C	Centrifugal spring	(SF-D21) エンシンバネ
58	LX-WZ1012CCZZ	AB	DD		C	Washer	(SF-D21) ワッシャ
59	CPLTM4097FC01	AF	DS	N	C	Centrifugal plate fixing plate	(SF-D21) エンシンバントリツケイタ
60	NGERH0871FCZZ	AB	DD	N	C	Gear 12	(SF-D21) ギヤ12
61	XHBSE40P10000	AA	DD		C	Screw (4×10)	(SF-D21) ビス
62	CPLTM4094FC01	AL	EB	N	C	Brake plate	(SF-D21) ブレーキバン
63	LPLTM4095FCZZ	AH	DX	N	C	Brake fixing plate	(SF-D21) ブレーキトリツケイタ
64	XBBSD30P04000	AA	DD		C	Screw (3×4)	(SF-D21) ビス
65	LPLTM4203FCZZ	AG	DX	N	C	Frame sub plate	(SF-D21) フレームヒキウケバン
66	LBSHZ2021HCZZ	AA	DD		C	Bushing (NRP-232)	(SF-D21) ブッシング
67	PSHEP3231FCZZ	AB	DD	N	C	Guide sheet	(SF-D21) キセイバンガイドシート
68	TLABZ3136FCZZ	AC	DJ	N	C	Size label AB-E (Japan only)	(SF-D21) サイズラベル AB-E
	TLABZ3187FCZZ	AC	DJ	N	C	Size label AB-F (Export‥AB series)	(SF-D21) サイズラベル AB-F
	TLABZ3139FCZZ	AC	DJ	N	C	Size label IN-C (Inch Series)	(SF-D21) サイズラベル IN-C
69	TLABZ3138FCZZ	AC	DD	N	C	Size label IN-B (Inch Series)	(SF-D21) サイズラベル IN-B
70	TLABZ3134FCZZ	AC	DD	N	C	Size label AB-C (Japan only)	(SF-D21) サイズラベル AB-C
	TLABZ3135FCZZ	AC	DD	N	C	Size label AB-D (Export‥AB series)	(SF-D21) サイズラベル AB-D
71	TLABZ3132FCZZ	AC	DD	N	C	Size label AB-A (Japan only)	(SF-D21) サイズラベル AB-A

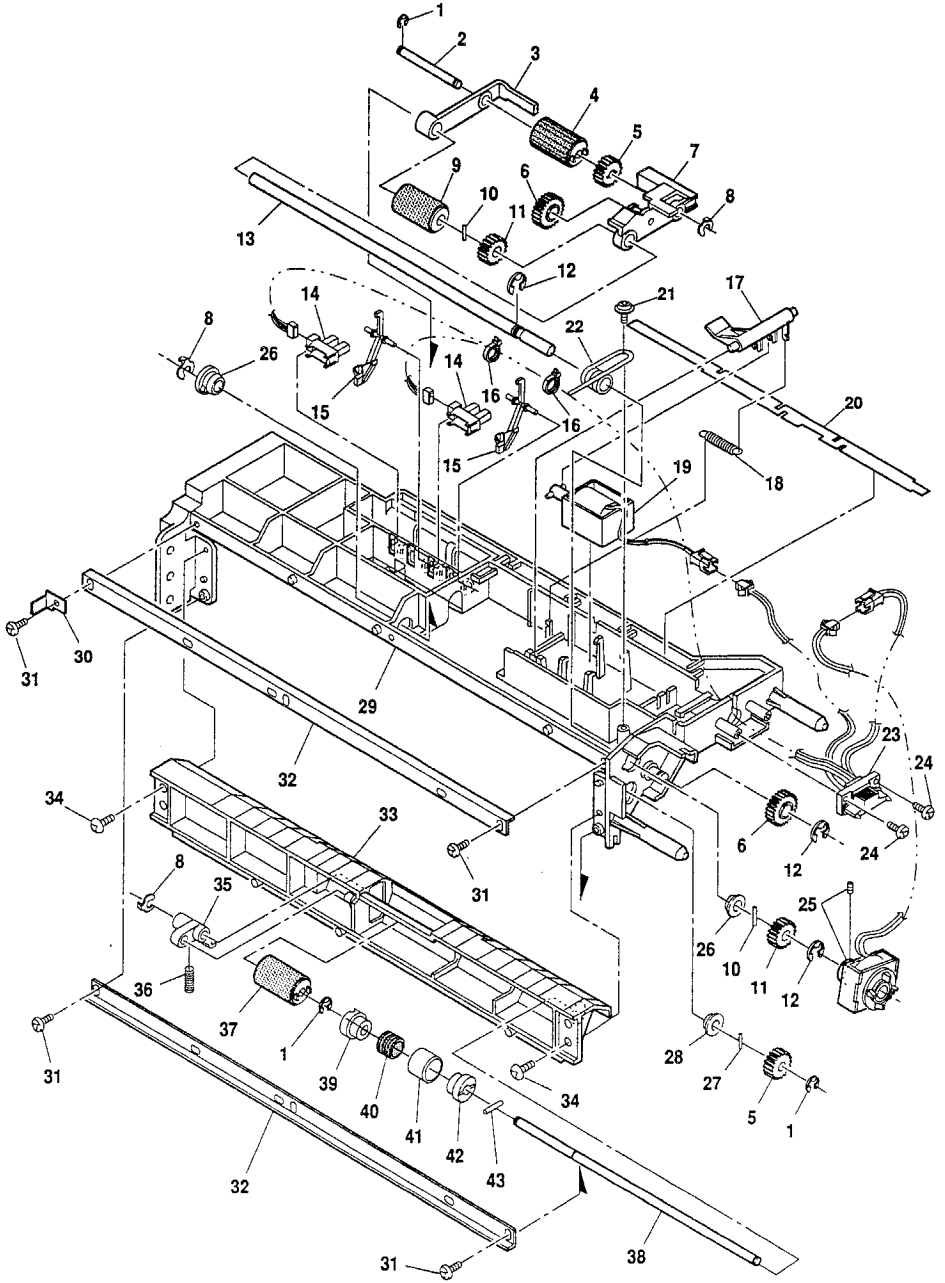
55 SF-D21‥デスクLCC外装(SF-D21‥Desk LCC exteriors)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
71	TLABZ3133FCZZ	AC	DD	N	C	Size label AB-B (Export‥AB Series)	(SF-D21) サイズラベル AB-B
72	TLABZ3137FCZZ	AC	DD	N	C	Size label IN-A (Inch series)	(SF-D21) サイズラベル IN-A

56 SF-D19, D19H, D20, D21‥500カセット給紙ユニット(SF-D19, D19H, D20, D21‥500 Cassette paper feeding unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP50-06000	AA	DD		C	E type ring	Eリング
2	NSFTZ1766FCZZ	AD	DJ	N	C	Pick-up roller shaft	ピックアップローラーシャフト
3	MLEVP0589FCZZ	AC	DD	N	C	Pick-up roller lever L	ピックUPローラーレバーL
4	NROLR0920FCZZ	AK	EB	N	C	Pick-up roller	ピックアップローラー
5	NGERH0863FCZZ	AB	DD	N	C	Pick-up roller gear 18T	ピックUPローラーギヤー18
6	NGERH0862FCZZ	AB	DD	N	C	Idle gear 20T	アイドルギヤー20T
7	MLEVP0586FCZZ	AC	DJ	N	C	Pick-up roller lever R	ピックUPローラーレバーR
8	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
9	NROLR0901FCZZ	AR	EZ	N	C	Paper feeding roller	キュウシローラー B9
10	LPINS0096FCZZ	AB	DD		C	Pin (3×12)	ヘイコウピン
11	NGERH0861FCZZ	AB	DD	N	C	Paper feeding roller gear 18T	キュウシローラーギヤー18
12	XRESP70-08000	AA	DD		C	E type ring	Eリング
13	NSFTZ1764FCZZ	AM	EG	N	C	Paper feeding roller shaft	キュウシローラシャフト
14	VHPGP1A71A1-1	AG	DX		B	Photo transistor (GP1A71A1)	フォトトランジスター
15	MLEVP0601FCZZ	AC	DJ	N	C	Sensor lever	センサーレバー
16	LBNDJ0043FCZZ	AA	DD		C	Band (SG-130)	スナップバンド
17	MLEVP0588FCZZ	AB	DD	N	C	Solenoid lever	ソレノイドレバー
18	MSPRC1942FCZZ	AB	DD	N	C	Solenoid lever spring	ソレノイドレバースプリング
19	RPLU-0278FCZZ	AQ	EQ	N	B	Pick-up solenoid	ピックアップソレノイド
20	PCOVP1154FCZZ	AD	DJ	N	C	Cover	フセンカバー
21	XEPSD30P08X00	AA	DD		C	Screw (3×8X)	ビス
22	MSPRC2012FCZZ	AD	DJ	N	C	Brake spring	ブレーキスプリング
23	DHAI-2049FCZZ	AQ	EZ	N	C	Paper feeding harness 1.2	キュウシハーネス1.2
24	XEBSD30P12000	AA	DD		C	Screw	ビス
25	PCLC-0208FCZZ	AW	FQ	N	C	Spring clutch	スプリングクラッチ
26	NBRGC0167FCZZ	AB	DD		C	PF bearing	PFジクウケ
27	LPINS0134FCZZ	AB	DD		C	Pin (2-12)	ヘイコウピン
28	NBRGC0457FCZZ	AD	DJ	N	C	Bearing	ジクウケ
29	CBRC-0048FC01	AS	FG	N	C	Main bracket	メインブラケット
30	QEARB0054FCZZ	AC	DD	N	C	Earth spring	アーススバネ
31	XEBSD30P08000	AA	DD		C	Screw (3×8)	ビス
32	LPLTM4057FCZZ	AF	DS	N	C	Reinforce plate	ホキョウバン B9
33	PGIDM1344FCZZ	AM	EG	N	C	Lower guide	シタガイド
34	XEBSD40P10000	AA	DD		C	Screw (4×10)	ビス
35	CLEVP0587FC01	AE	DJ	N	C	Roller lever	ギャクテンローラーレバー
36	MSPRC1943FCZZ	AB	DD	N	C	Roller lever spring	ギャクテンローラーレバースプリング
37	NROLR0902FCZZ	AK	EB	N	C	Roller	ギャクテンローラー
38	NSFTZ1765FCZZ	AH	DX	N	C	Roller shaft	ギャクテンローラシャフト
39	CCLR-0372FC01	AH	DX	N	C	Collar	ショウケツカラー
40	MSPRC1969FCZZ	AF	DS	N	C	Spring	トルクリミッタースプリング
41	PCOVP1142FCZZ	AC	DD	N	C	Cover	トルクリミッターカバー
42	PCLR-0373FCZZ	AC	DD	N	C	Collar	ジュシカラー
43	XPSSJ20-15000	AA	DD	N	C	Pin	ピン
	ユニット (Unit)						
901	DUNT-6546FCZZ	BQ	MJ	N	E	500 cassette paper feeding unit	500カセットキュウシユニット

66 SF-D19, D19H, D20, D21‥500カセット給紙ユニット(SF-D19, D19H, D20, D21‥500 Cassette paper feeding unit)



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67 SF-D19, D19H, D20, D21‥デスクメイン基板(SF-D19, D19H, D20, D21‥Desk Main PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	QCNCW0381FCZZ	AE	DS		C	Connector (30pin)	コネクター
2	QCNCW0449FCZZ	AB	DD		C	Connector (9pin)	コネクター
3	QCNCW0455FCZZ	AC	DJ		C	Connector (15pin)	コネクター
4	QCNCW0535FCZZ	AB	DD		C	Connector (6pin)	コネクター
5	QCNCM0539FCZZ	AE	DJ		C	Connector (24pin)	コネクター
6	QSW-P0387FCZZ	AB	DD		B	Push switch	タクトスイッチ
7	QSW-S5127NCZZ	AH	DS		B	Slide switch	スライドスイッチ
8	RC-QZ0244FCZZ	AE	DS		C	Capacitor (50WV 1.0μF)	コンデンサー
9	RCRS-0008FCZZ	AD	DJ		C	Crystal (9.83MHz)	クリスタル
10	RMPTC0103QCJB	AB	DD		B	Block resistor (10KΩ×10 1/8W ±5%)	ブロックテイコウ
11	RMPTC0562QCKB	AD	DJ		B	Block resistor (5.6KΩ×10)	ブロックテイコウ
12	RMPTW4101QCJE	AC	DD		B	Block resistor (100Ω×4 1/8W ±5%)	ブロックテイコウ
13	RMPTC4103QCJB	AD	DJ		C	Block resistor (10KΩ×4 1/8W ±5%)	ブロックテイコウ
14	RMPTW4103QCJE	AC	DD		B	Block resistor (10KΩ×4 1/4W ±5%)	ブロックテイコウ
15	RMPTC4472QCJB	AB	DD		B	Block resistor (4.7KΩ×4 1/8W ±5%)	ブロックテイコウ
16	RMPTC5103QCJB	AD	DJ		B	Block resistor (10KΩ×5 1/8W ±5%)	ブロックテイコウ
17	RMPTW5562QCJB	AC	DD	N	B	Block resistor (5.6KΩ×5 1/8W ±5%)	ブロックテイコウ
18	RMPTW5562QCJE	AB	DD		B	Block resistor (5.6KΩ×5 1/4W ±5%)	ブロックテイコウ
19	VCEAGU1CW476M	AB	DD		C	Capacitor (16WV 47μF)	コンデンサー
20	VCEAGU1VW476M	AB	DD		C	Capacitor (35WV 47μF)	コンデンサー
21	VCKYPU1HB102K	AA	DD		C	Capacitor (50WV 1000PF)	コンデンサー
22	VCKYPU1HB103K	AA	DD		C	Capacitor (50WV 0.010μF)	コンデンサー
23	VCKYPU1HB223Z	AA	DD		C	Capacitor (50WV 0.022μF)	コンデンサー
24	VHDDSS133HV-1	AA	DD		B	Diode (DSS133HV)	ダイオード
25	VHD1S2584//-1	AH	DS		B	Diode (1S2584)	ダイオード
26	VHiiR2C23//-1	AF	DS		B	IC (IR2C23)	IC
27	VHiLM393P//-1	AM	EG		B	IC (LM393P)	IC
28	VHiSN74LS06-1	AE	EB		B	IC (SN74LS06)	IC
29	VHiTC74HC14PN	AG	DX		B	IC (TC74HC14PN)	IC
30	VHiTD62503P-1	AG	DX		B	IC (TD62503P)	IC
31	VHiUPA2004C-1	AN	EG		B	IC (UPA2004C)	IC
32	VHi91P64001FC	BF	HC	N	B	IC (91P64001FC)	IC
33	VRD-RC2EY102J	AA	DD		C	Resistor (1/4W 1KΩ ±5%)	テイコウ
34	VRD-RC2EY103J	AA	DD		C	Resistor (1/4W 10KΩ ±5%)	テイコウ
35	VRD-RC2EY123J	AA	DD		C	Resistor (1/4W 12KΩ ±5%)	テイコウ
36	VRD-RC2EY183J	AA	DD		C	Resistor (1/4W 18KΩ ±5%)	テイコウ
37	VRD-RC2EY222J	AA	DD		C	Resistor (1/4W 2.2KΩ ±5%)	テイコウ
38	VRD-RC2EY223J	AA	DD		C	Resistor (1/4W 22KΩ ±5%)	テイコウ
39	VRD-RC2EY392J	AA	DD		C	Resistor (1/4W 3.9KΩ ±5%)	テイコウ
40	VRD-RC2EY393J	AA	DD		C	Resistor (1/4W 39KΩ ±5%)	テイコウ
41	VRD-RC2EY472J	AA	DD		C	Resistor (1/4W 4.7KΩ ±5%)	テイコウ
42	VRD-RC2EY683J	AA	DD		C	Resistor (1/4W 68KΩ ±5%)	テイコウ
43	VRD-RC2EY513J	AA	DD		C	Resistor (1/4W 51KΩ ±5%)	テイコウ
44	VRS-RE3DAR33J	AB	DD	N	C	Resistor (2W 0.33Ω ±5%)	テイコウ
45	VRS-RE3DA200J	AB	DD	N	C	Resistor (2W 20Ω ±5%)	テイコウ
46	VS2SB1020-/-1	AH	DX		B	Transistor (2SB1020)	トランジスター
47	VS2SB1185-EFC	AG	DS		B	Transistor (2SB1185-EFC)	トランジスター
	ユニット (Unit)						
901	CPWBF0938FC51	BQ	MP	N	E	Desk main PWB	デスクメインキバン

68 SF-D19, D19H, D20, D21‥デスク梱包材&付属品(SF-D19, D19H, D20, D21‥Desk packing material & Accessories)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
1	CPAKA4703FC01	AY	GD	N	D	Bottom case		ソコケース
2	CPAKA4799FC01	AT	FG	N	D	Top packing cushion		テンパッキングクッション
3	PSHEZ0287FCZZ	AG	DS		D	Packing sheet for body		ポリシート(ホンタイヨウ)
4	PSHEZ3214FCZZ	AB	DD	N	C	Connector protect sheet		コネクターホゴシート
5	SPAKA1672FCZZ	AA	DD		D	Packing cushion		エサフォーム
6	SPAKA4710FCZZ	AD	DJ	N	D	Protect packing cushion A		ホゴザイA
7	SPAKA4797FCZZ	AC	DD	N	D	Protect packing cushion B		ホゴザイ B
8	SPAKA4826FCZZ	AC	DD	N	D	Protect packin C	(SF-D19,SF-D19H,SF-D20)	ホゴザイ C
9	SPAKA4827FCZZ	AD	DJ	N	D	PF unit packing cushion	(SF-D19,SF-D19H)	キュウシUNアド
10	SPAKA4828FCZZ	AD	DJ	N	D	PF unit packing cushion	(SF-D21)	キュウシUNアド
11	SPAKC4737FCZZ	AY	GD	N	D	Packing case (Japan only)	(SF-D19H)	パッキングケース(コクナイ)
	SPAKC4697FCZZ	AY	GD	N	D	Packing case (Japan only)	(SF-D19)	パッキングケース(コクナイ)
	SPAKC4698FCZZ	AY	GD	N	D	Packing case (Export)	(SF-D20)	パッキングケース
	SPAKC4699FCZZ	AY	GD	N	D	Packing case (Japan only)	(SF-D21)	パッキングケース(コクナイ)
	SPAKC4700FCZZ	AY	GD	N	D	Packing case (Export)	(SF-D21)	パッキングケース
12	SSAKA0006UCZZ	AA	DD		D	Vinyl bag(for screw) (50×60㎜)		ポリブクロ
13	SSAKA3440QCZZ	AB	DD		D	Vinyl bag (300×420㎜)		ポリブクロ
14	TCADZ0991FCZZ	AB	DD	N	D	D19 caution card (Japan only)	(SF-D19,SF-D19H,SF-D21)	D19チュウイショ J
	TCADZ0993FCZZ	AB	DD	N	D	D20 caution card (USA,Australia,U,Kingdom)	(SF-D20,SF-D21)	D20チュウイショ U
	TCADZ0994FCZZ	AB	DD	N	D	D20 caution card (Other countries)	(SF-D20,SF-D21)	D20チュウイショ E4
15	TCADZ0992FCZZ	AE	DS	N	D	Installation manual (Japan only)	(SF-D19,SF-D19H,SF-D21)	D19セッチテジュンショ J
	TCADZ0995FCZZ	AF	DS	N	D	installation manual (USA,Australia,U,Kingdom)	(SF-D20,SF-D21)	D20セッチテジュンショ U
	TCADZ0996FCZZ	AH	DX	N	D	installation manual (Other countries)	(SF-D20,SF-D21)	D20セッチテジュンショ E4
16	TLABH2013FCZZ	AA	DD		C	Guarantee label (USA only)	(SF-D20,SF-D21)	ホショウショ
17	TLABH3062FCZZ	AB	DD		C	Patent display label (USA only)	(SF-D20,SF-D21)	トッキョヒョウジラベル
18	TLABZ0218FCZZ	AB	DD		C	Packing label		コンポウラベル
19	TLABH2646FCZZ	AB	DD		C	Label		ビスカイコンラベル
20	XEBSD40P12000	AA	DD		C	Screw (4×12)	(SF-D19,SF-D19H,SF-D20)	ビス
	LX-BZ4010SC0M	AA	DD		C	Screw (4×10)	(SF-D21)	ビス
21	XBBSC40P10000	AA	DD		C	Screw (4×10)		ビス

■索 引 (Index)

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
〔C〕					
CBŐX-0089FC01	14- 15	AX	FX	N	C
CBŐX-0089FC51	14- 901	BV	RR	N	E
CBŐX-0090FC51	15- 901	BK	HV	N	E
CBRC-0048FC01	26- 29	AS	FG	N	C
〃	40- 29	AS	FG	N	C
〃	66- 29	AS	FG	N	C
CBTN-0136FC31	2- 15	AE	DS	N	E
CBTN-0137FC01	2- 14	AD	DJ	N	C
CBTN-0138FC01	2- 13	AG	DS	N	C
CBTN-0139FC01	2- 12	AD	DJ	N	C
CBTN-0140FC01	2- 11	AE	DS	N	C
CBTN-0141FC01	2- 10	AE	DS	N	C
CBTN-0142FC01	2- 9	AE	DS	N	C
CBTN-0143FC01	2- 8	AD	DJ	N	C
CBTN-0145FC01	2- 9	AE	DS	N	C
CCAB-0749FC01	1- 7	BB	GN	N	D
CCAB-0749FC02	1- 7	BB	GN	N	D
CCAB-0751FC01	1- 1	BD	GX	N	D
CCAB-0751FC02	1- 1	BD	GX	N	D
CCAB-0751FC03	1- 1	BE	GX	N	D
CCAB-0751FC04	1- 1	BD	GX	N	D
CCAB-0751FC05	1- 1	BD	GX	N	D
CCAB-0751FC06	1- 1	BD	GX	N	D
CCAB-0751FC07	1- 1	BE	GX	N	D
CCAB-0751FC08	1- 1	BD	GX	N	D
CCAB-0751FC09	1- 1	BD	GX	N	D
CCAB-0751FC10	1- 1	BD	GX	N	D
CCASP0154FC31	27- 901	BF	HG	N	E
CCASP0154FC32	27- 901	BF	HG	N	E
CCASP0154FC33	37- 501	BF	HG	N	E
CCASP0154FC34	37- 501	BF	HG	N	E
CCASP0156FC31	29- 901	BR	MW	N	E
〃	39- 901	BR	MW	N	E
〃	52- 901	BR	MW	N	E
CCASP0156FC34	52- 901	BR	MW	N	E
CCASP0156FC35	52- 901	BR	MW	N	E
CCASP0156FC37	39- 901	BR	MW	N	E
CCASP0156FC38	39- 901	BR	MW	N	E
CCASZ0067FC01	36- 1	AD	DJ		D
CCASZ0067FC02	36- 1	AM	EG		D
CCASZ0235FC51	25- 901	AZ	GD	N	E
CCLR-0372FC01	26- 39	AH	DX	N	C
〃	40- 39	AH	DX	N	C
〃	66- 39	AH	DX	N	C
CCŐVP1132FC31	12- 28	AX	FX	N	E
CDAIU0451FC51	16- 21	AQ	EQ	N	E
CDAIU0459FC01	10- 12	AP	EQ	N	C
CDAIU0460FC01	44- 16	AM	EG	N	C
CFRM-0732FC51	16- 502	BN	LP	N	E
CFRM-0733FC51	16- 501	BL	LE	N	E
CFRM-0737FC01	20- 27	AU	FQ	N	C
CFRM-0738FC01	20- 45	AN	EQ	N	C
CFRM-0740FC01	19- 9	AW	FX	N	C
CFRM-0740FC31	9- 9	BK	HZ	N	E
〃	19- 901	BK	HZ	N	E
CFRM-0741FC01	43- 107	AN	EQ	N	C
CFRM-0743FC01	31- 20	AG	DX	N	C
CFRM-0744FC01	31- 36	AM	EG	N	C
CFRM-0748FC01	17- 50	AW	FQ	N	C
CFS-T0095FC31	10- 5	AK	EB	N	E
CFTA-0088FC01	1- 6	AP	EQ	N	C
CGERH0430FC01	43- 99	AD	DJ		C
CGERH0564FC01	17- 10	AK	EB		C
CGERH0882FC01	14- 23	AE	DS	N	C
CGERH0883FC01	14- 26	AE	DS	N	C
CGIDH1360FC01	43- 66	AY	FX	N	C
CGIDH1363FC01	6- 22	AM	EG	N	C
CGIDM1338FC01	1- 16	AP	EQ	N	C
CGIDM1338FC02	1- 16	AP	EQ	N	C
CGIDM1338FC03	1- 16	AN	EG	N	C
CGIDM1341FC01	18- 2	AX	FX	N	C
CGIDM1358FC01	25- 8	AN	EG	N	C
CHLDZ1091FC01	16- 50	AN	EG	N	C
CHLDZ1101FC01	17- 61	AP	EQ	N	C
CLEVP0587FC01	26- 35	AE	DJ	N	C
〃	40- 35	AE	DJ	N	C
〃	66- 35	AE	DJ	N	C
CPAKA4691FC01	36- 2	AZ	GD	N	D
CPAKA4703FC01	68- 1	AY	GD	N	D

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
CPAKA4799FC01	68- 2	AT	FG	N	D
CPLTM4027FC01	16- 61	AL	EG	N	C
CPLTM4027FC02	16- 61	AK	EB	N	C
CPLTM4031FC01	18- 42	AX	FX	N	C
CPLTM4036FC01	20- 41	AH	DX	N	C
CPLTM4037FC01	21- 19	AG	DS	N	C
CPLTM4038FC01	44- 11	AK	EB	N	C
CPLTM4038FC31	44- 901	BL	HZ	N	E
CPLTM4040FC01	27- 4	AP	EQ	N	C
〃	29- 11	AP	EQ	N	C
〃	37- 4	AP	EQ	N	C
〃	39- 11	AP	EQ	N	C
〃	52- 11	AP	EQ	N	C
CPLTM4058FC01	43- 4	AG	DS	N	C
CPLTM4060FC01	43- 92	AD	DJ	N	C
CPLTM4062FC01	6- 5	AH	DX	N	C
CPLTM4062FC02	6- 8	AH	DX	N	C
CPLTM4067FC51	24- 901	BB	GN	N	E
CPLTM4078FC01	49- 14	AQ	EZ	N	C
〃	57- 14	AQ	EZ	N	C
〃	62- 14	AQ	EZ	N	C
CPLTM4081FC01	50- 10	AR	EZ	N	C
CPLTM4085FC01	65- 43	BA	GJ	N	D
CPLTM4086FC01	65- 26	AX	FX	N	D
CPLTM4087FC01	65- 46	AX	FX	N	D
CPLTM4094FC01	65- 62	AL	EB	N	C
CPLTM4097FC01	65- 59	AF	DS	N	C
CPLTM4099FC01	64- 8	AM	EG	N	C
CPLTM4100FC01	64- 21	AH	DX	N	C
CPLTM4129FC01	24- 9	AS	EZ	N	C
CPLTM4145FC01	18- 4	AG	DX	N	C
CPLTM4179FC01	8- 15	AN	EQ	N	C
CPWBF0929FC51	2- 17	BS	NE	N	E
〃	33- 901	BS	NE	N	E
CPWBF0929FC52	2- 17	BS	NE	N	E
〃	33- 901	BS	NE	N	E
CPWBF0929FC53	2- 17	BS	NE	N	E
〃	33- 901	BS	NE	N	E
CPWBF0930FC51	23- 15	BM	LJ	N	E
〃	34- 901	BM	LJ	N	E
CPWBF0931FC51	23- 15	BQ	MJ	N	E
〃	34- 901	BQ	MJ	N	E
CPWBF0932FC51	16- 9	BF	HG	N	E
CPWBF0934FC31	3- 9	AX	FX	N	E
CPWBF0934FC32	3- 9	AX	FX	N	E
CPWBF0935FC31	12- 26	AX	FX	N	E
CPWBF0935FC32	12- 26	AX	FX	N	E
CPWBF0936FC31	13- 1	AP	EQ	N	E
〃	41- 1	AP	EQ	N	E
〃	53- 1	AP	EQ	N	E
〃	61- 25	AP	EQ	N	E
CPWBF0938FC51	48- 5	BQ	MP	N	E
〃	56- 5	BQ	MP	N	E
〃	61- 5	BQ	MP	N	E
〃	67- 901	BQ	MP	N	E
CPWBF0939FC31	9- 45	CD	UF	N	E
〃	35- 901	CD	UF	N	E
CPWBF0940FC31	13- 2	AS	FG	N	E
〃	41- 2	AS	FG	N	E
〃	53- 2	AS	FG	N	E
CPWBF0941FC31	11- 43	AS	FG	N	E
CPWBF0942FC51	23- 15	BM	LJ	N	E
〃	34- 901	BM	LJ	N	E
CPWBF0944FC31	9- 45	CE	UK	N	E
〃	35- 901	CE	UK	N	E
CPWBF0954FC31	43- 10	AS	FG	N	E
CPWBN0928FC51	9- 4	CD	UF	N	E
〃	32- 901	CD	UF	N	E
CR-WZ0244FC05	18- 82	AQ	EZ		B
CRALM0096FC01	7- 1	AR	EZ	N	C
CRALM0097FC01	28- 16	AR	EZ	N	C
CRALM0098FC01	28- 7	AR	EZ	N	C
CRALM0103FC01	43- 24	AQ	EQ	N	C
CRALM0104FC01	43- 26	AQ	EQ	N	C
CRALM0105FC01	46- 20	AR	EZ	N	C
〃	54- 20	AR	EZ	N	C
〃	59- 20	AR	EZ	N	C
CRALM0106FC01	46- 15	AR	EZ	N	C
〃	54- 15	AR	EZ	N	C
〃	59- 15	AR	EZ	N	C

SF2027

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
CRALM0107FC01	65- 41	AW	FQ	N	C	
CRALM0108FC01	65- 45	AW	FQ	N	C	
CRALM0110FC01	29- 27	AQ	EZ	N	C	
〃	39- 27	AQ	EZ	N	C	
〃	52- 27	AQ	EZ	N	C	
CRALM0111FC01	29- 7	AQ	EZ	N	C	
〃	39- 7	AQ	EZ	N	C	
〃	52- 7	AQ	EZ	N	C	
CREFL0145FC31	10- 901	BN	LP	N	E	
〃	12- 89	BN	LP	N	E	
CREFL0145FC32	10- 901	BN	LP	N	E	
〃	12- 89	BN	LP	N	E	
CRŌLN0935FC31	17- 25	BF	HG	N	C	
CRŌLP0921FC01	31- 28	AM	EG	N	C	
CRŌLR0897FC01	18- 48	AS	EZ	N	C	
CRŌLR0900FC01	7- 12	AR	EZ	N	C	
CRŌLR0938FC01	47- 9	AR	EZ	N	C	
〃	55- 9	AR	EZ	N	C	
〃	60- 9	AR	EZ	N	C	
CSFTZ1771FC31	31- 56	AT	FG	N	E	
CSLI-0103FC31	10- 9	AF	DS		E	
〃	11- 4	AF	DS		E	
CSŌU-0098FC01	43- 38	BF	HG	N	C	
CSŌU-0099FC31	30- 901	BB	GN	N	E	
CSŌU-0099FC32	30- 901	BD	GX	N	E	
CSŌU-0099FC33	30- 901	BD	GX	N	E	
CSŌU-0099FC34	30- 901	BD	GX	N	E	
CSŌU-0103FC01	36- 3	AW	FQ	N	D	
CYŌK-0039FC01	36- 4	AQ	EQ	N	D	
[D]						
DHAI-2029FCZZ	55- 16	AQ	EQ	N	C	
〃	60- 16	AQ	EQ	N	C	
DHAI-2030FCZZ	47- 16	AR	EZ	N	C	
DHAI-2031FCZZ	48- 6	AP	EQ	N	C	
〃	56- 6	AP	EQ	N	C	
〃	61- 6	AP	EQ	N	C	
DHAI-2032FCZZ	56- 7	AY	GD	N	C	
DHAI-2033FCZZ	61- 7	BA	GJ	N	C	
DHAI-2034FCZZ	48- 7	BA	GJ	N	C	
DHAI-2036FCZZ	2- 19	AQ	EZ	N	C	
DHAI-2037FCZZ	9- 1	AS	FG	N	C	
DHAI-2038FCZZ	11- 42	AU	FQ	N	C	
DHAI-2039FCZZ	11- 42	AU	FQ	N	C	
DHAI-2040FCZZ	9- 2	BF	HC	N	C	
DHAI-2041FCZZ	9- 2	BG	HG	N	C	
DHAI-2042FCZZ	22- 9	AQ	EZ	N	C	
DHAI-2043FCZZ	20- 7	AS	FG	N	C	
DHAI-2044FCZZ	9- 3	BL	LE	N	C	
DHAI-2045FCZZ	7- 3	AM	EG	N	C	
DHAI-2046FCZZ	18- 67	AH	DX	N	C	
DHAI-2048FCZZ	8- 2	AF	DS	N	C	
DHAI-2049FCZZ	26- 23	AQ	EZ	N	C	
〃	40- 23	AQ	EZ	N	C	
〃	66- 23	AQ	EZ	N	C	
DHAI-2051FCZZ	43- 39	BA	GJ	N	C	
DHAI-2052FCZZ	44- 13	AV	FQ	N	C	
DHAI-2053FCZZ	43- 65	AG	DS	N	C	
DHAI-2054FCZZ	43- 79	AF	DS	N	C	
DHAI-2055FCZZ	31- 1	AK	EB	N	C	
DHAI-2056FCZZ	17- 62	AS	EZ	N	C	
DHAI-2057FCZZ	16- 10	AR	EZ	N	C	
DHAI-2059FCZZ	8- 4	AR	EZ	N	C	
DHAI-2060FCZZ	14- 29	AQ	EQ	N	C	
DHAI-2065FCZZ	20- 15	AD	DJ	N	C	
DHAI-2066FCZZ	20- 16	AD	DJ	N	C	
DHAI-2067FCZZ	10- 14	AV	FQ	N	C	
DHAI-2068FCZZ	10- 18	AF	DS	N	C	
DHAI-2070FCZZ	9- 33	AK	EB	N	C	
DHAI-2071FCZZ	9- 30	AH	DX	N	C	
DHAI-2072FCZZ	9- 39	AE	DS	N	C	
DHAI-2073FCZZ	20- 14	AD	DJ	N	C	
DHAI-2095FCZZ	17- 62	AS	EZ	N	C	
DHAI-2098FCZZ	8- 4	AS	EZ	N	C	
DHAI-2099FCZZ	9- 3	BM	LJ	N	C	
DHAI-2101FCZZ	48- 23	AK	EB	N	C	
DHAI-2103FCZZ	23- 22	AH	DX	N	C	
DHAI-2108FCZZ	18- 65	AD	DJ	N	C	
DHAI-2109FCZZ	34- 1	AC	DJ	N	C	
DUNT-6546FCZZ	26- 901	BQ	MJ	N	E	
〃	40- 901	BQ	MJ	N	E	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
DUNT-6546FCZZ	66- 901	BQ	MJ	N	E	
DUNT-6547FCZZ	31- 901	BQ	MJ	N	E	
DUNTM6554FCZZ	9- 16	BF	HG	N	E	
〃	9- 17	BF	HG	N	E	
〃	13- 901	BF	HG	N	E	
〃	41- 901	BF	HG	N	E	
〃	48- 17	BF	HG	N	E	
〃	53- 901	BF	HG	N	E	
〃	56- 17	BF	HG	N	E	
DUNTM6560FCZZ	9- 15	BP	MB	N	E	
〃	20- 901	BP	MB	N	E	
DUNTM6566FCZZ	43- 901	CL	UZ	N	E	
DUNTW6572FCZZ	17- 901	CB	UA	N	E	
DUNTW6572FC11	17- 901	CB	UA	N	E	
DUNTW6572FC12	17- 901	CB	UA	N	E	
DUNTW6572FC13	17- 901	CB	UA	N	E	
DUNTW6572FC14	17- 901	CB	UA	N	E	
DUNTW6572FC15	17- 901	CB	UA	N	E	
DUNTW6572FC16	17- 901	CB	UA	N	E	
DUNTW6572FC17	17- 901	CB	UA	N	E	
DUNTW6572FC18	17- 901	CB	UA	N	E	
DWIR-0466CSZZ	25- 3	BG	HC		A	
[G]						
GCAB-0746FCZZ	1- 13	AN	EG	N	D	
GCAB-0747FCZZ	1- 17	AN	EG	N	D	
GCAB-0748FCZZ	3- 12	AW	FQ	N	D	
GCAB-0748FCZ1	3- 12	AW	FQ	N	D	
GCAB-0750FCZZ	1- 9	BD	GT	N	D	
GCAB-0752FCZZ	6- 1	AZ	GD	N	D	
GCAB-0753FCZZ	6- 4	AU	FQ	N	D	
GCAB-0754FCZZ	1- 8	AZ	GD	N	D	
GCAB-0755FCZZ	46- 12	AW	FX	N	D	
〃	54- 12	AW	FX	N	D	
〃	59- 12	AW	FX	N	D	
GCAB-0756FCZZ	46- 22	BB	GJ	N	D	
〃	54- 22	BB	GJ	N	D	
〃	59- 22	BB	GJ	N	D	
GCAB-0757FCZZ	46- 10	AY	GD	N	D	
〃	54- 10	AY	GD	N	D	
〃	59- 10	AY	GD	N	D	
GCAB-0758FCZZ	46- 11	AR	EZ	N	D	
〃	54- 11	AR	EZ	N	D	
〃	59- 11	AR	EZ	N	D	
GCAB-0759FCZZ	46- 4	AU	FQ	N	D	
〃	54- 4	AU	FQ	N	D	
〃	59- 4	AU	FQ	N	D	
GCAB-0760FCZZ	65- 1	BA	GJ	N	D	
GCASP0154FCZZ	27- 13	AY	GD	N	D	
〃	37- 13	AY	GD	N	D	
GCASP0155FCZZ	28- 9	BA	GJ	N	D	
GCASP0156FCZZ	29- 18	BB	GN	N	D	
〃	39- 18	BB	GN	N	D	
〃	52- 18	BB	GN	N	D	
GCŌVH0206FCZZ	5- 5	BA	GJ	N	D	
GCŌVZ0196FCZZ	36- 5	AV	FQ		D	
GLEGM0046FCZZ	46- 23	AP	EQ		C	
〃	54- 23	AP	EQ		C	
〃	59- 23	AP	EQ		C	
GLEGM0047FCZZ	46- 24	AP	EQ		C	
〃	54- 24	AP	EQ		C	
〃	59- 24	AP	EQ		C	
[H]						
HINDP0367FCZZ	2- 1	AN	EQ	N	D	
HINDP0368FCZZ	2- 2	AT	FG	N	D	
HINDP0369FCZZ	2- 3	AR	EZ	N	D	
HINDP0370FCZZ	2- 1	AN	EQ	N	D	
HINDP0371FCZZ	2- 2	AT	FG	N	D	
HINDP0372FCZZ	2- 3	AR	EZ	N	D	
HINDP0373FCZZ	2- 1	AN	EQ	N	D	
HINDP0374FCZZ	2- 2	AT	FG	N	D	
HINDP0375FCZZ	2- 3	AR	EZ	N	D	
HINDP0376FCZZ	2- 1	AN	EQ	N	D	
HINDP0377FCZZ	2- 2	AT	FG	N	D	
HINDP0378FCZZ	2- 1	AT	FG	N	D	
HINDP0379FCZZ	2- 2	AT	FG	N	D	
HINDP0380FCZZ	2- 1	AT	FG	N	D	
HINDP0381FCZZ	2- 2	AT	FG	N	D	
HINDP0382FCZZ	2- 2	AT	FG	N	D	
HINDP0383FCZZ	2- 2	AR	EZ	N	D	
HINDP0384FCZZ	2- 2	AT	FG	N	D	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
HINDP0385FCZZ	2- 2	AT	FG	N	D	
HINDP0386FCZZ	2- 2	AT	FG	N	D	
HINDP0388FCZZ	2- 2	AT	FG	N	D	
HINDP0394FCZZ	2- 2	AT	FG	N	D	
HINDP0395FCZZ	2- 2	AT	FG	N	D	
HINDP0396FCZZ	2- 2	AT	FG	N	D	
HINDP0398FCZZ	2- 1	AT	FG	N	D	
HINDP0399FCZZ	2- 2	AT	FG	N	D	
HINDP0400FCZZ	2- 2	AT	FG	N	D	
HPNLC0208FCZZ	2- 6	AW	FX	N	D	
[J]						
JBTN-0144FCZZ	2- 7	AC	DJ	N	C	
JHNDM0069FCZZ	8- 13	AH	DX		C	
JHNDP0107FCZZ	28- 1	AW	FQ	N	C	
〃	29- 1	AW	FQ	N	C	
〃	39- 1	AW	FQ	N	C	
〃	43- 15	AW	FQ	N	C	
〃	52- 1	AW	FQ	N	C	
JHNDP0109FCZZ	15- 19	AD	DJ	N	C	
JHNDP0110FCZZ	17- 1	AE	DS	N	C	
JHNDP0111FCZZ	43- 69	AK	EB	N	C	
JKNBP0120FCZZ	18- 40	AE	DJ	N	C	
JKNBP0121FCZZ	17- 41	AE	DS	N	C	
JKNBP0122FCZZ	16- 7	AC	DD	N	C	
[L]						
LANGT1343FCZZ	6- 30	AD	DJ	N	C	
LBNDJ0013FCZZ	10- 13	AA	DD		C	
〃	23- 17	AA	DD		C	
〃	31- 2	AA	DD		C	
〃	47- 22	AA	DD		C	
〃	48- 22	AA	DD		C	
〃	55- 22	AA	DD		C	
〃	56- 22	AA	DD		C	
〃	60- 22	AA	DD		C	
〃	61- 22	AA	DD		C	
LBNDJ0037FCZZ	17- 59	AA	DD		C	
〃	43- 64	AA	DD		C	
LBNDJ0043FCZZ	7- 4	AA	DD		C	
〃	17- 63	AA	DD		C	
〃	23- 2	AA	DD		C	
〃	26- 16	AA	DD		C	
〃	40- 16	AA	DD		C	
〃	47- 27	AA	DD		C	
〃	48- 21	AA	DD		C	
〃	56- 21	AA	DD		C	
〃	61- 21	AA	DD		C	
〃	66- 16	AA	DD		C	
LBŌSZ0979FCZZ	31- 43	AF	DS		C	
LBŌSZ1124FCZZ	31- 40	AF	DS		C	
LBŌSZ1125FCZZ	31- 37	AC	DD		C	
LBŌSZ1410FCZZ	12- 73	AE	DS	N	C	
LBŌSZ1414FCZZ	43- 17	AF	DS	N	C	
LBSHC0164FCZZ	48- 8	AB	DD		C	
〃	56- 8	AB	DD		C	
〃	61- 8	AB	DD		C	
LBSHC0228FCZZ	17- 33	AG	DS		C	
LBSHC0247FCZZ	12- 88	AB	DD		C	
LBSHZ1102CCZZ	3- 5	AC	DD		B	
LBSHZ2021HCZZ	65- 66	AA	DD		C	
LBSHZ2050SCZZ	1- 24	AB	DD		C	
LDAIU0325FCŌZ	36- 6	AN	EQ		D	
LDAIU0448FCZZ	18- 62	BE	HC	N	C	
LDAIU0449FCZZ	27- 8	AC	DJ	N	C	
〃	29- 26	AC	DJ	N	C	
〃	37- 8	AC	DJ	N	C	
〃	39- 26	AC	DJ	N	C	
〃	52- 26	AC	DJ	N	C	
〃	65- 24	AC	DJ	N	C	
LDAIU0450FCZZ	17- 42	AB	DD	N	C	
LDAIU0453FCZZ	8- 6	AU	FQ	N	C	
LDAIU0454FCZZ	23- 1	AN	EQ	N	C	
LDAIU0456FCZZ	65- 16	AX	FX	N	C	
LDAIU0457FCZZ	44- 17	AH	DX	N	C	
LFIX-0016FCZZ	23- 12	AD	DJ		C	
LFIX-0084FCZZ	23- 12	AC	DD		C	
LFIX-0284FCZZ	11- 11	AC	DD		C	
〃	11- 29	AC	DD		C	
LFIX-0320FCZZ	12- 33	AB	DD		C	
LFIX-0438FCZZ	11- 9	AD	DJ	N	C	
LFIX-0439FCZZ	11- 10	AC	DD	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
LFIX-0440FCZZ	6- 24	AB	DD	N	C	
LFIX-0441FCZZ	17- 17	AB	DD	N	C	
LFIX-0442FCZZ	17- 16	AB	DD	N	C	
LFIX-0443FCZZ	65- 47	AB	DD	N	C	
LFIX-0444FCZZ	65- 10	AK	EB	N	C	
LFIX-0445FCZZ	10- 17	AD	DJ	N	C	
LFIX-0446FCZZ	17- 18	AC	DJ	N	C	
LFRM-0730FCZZ	21- 21	AK	EB	N	C	
LFRM-0731FCZZ	22- 8	AH	DX	N	C	
LFRM-0732FCZZ	16- 32	AX	FX	N	C	
LFRM-0733FCZZ	16- 11	AT	FG	N	C	
LFRM-0736FCZZ	9- 35	BG	HG	N	C	
LFRM-0739FCZZ	19- 17	AK	EB	N	C	
LFRM-0742FCZZ	43- 94	AG	DX	N	C	
LFRM-0745FCZZ	31- 9	AE	DJ	N	C	
LFRM-0746FCZZ	31- 49	AC	DD	N	C	
LFRM-0747FCZZ	17- 15	AX	FX	N	C	
LHLDW0544FCZZ	44- 14	AC	DD		C	
LHLDW1009FCZZ	23- 6	AB	DD		C	
LHLDW1010FCZZ	9- 20	AB	DD		C	
LHLDW1112FCZZ	23- 6	AA	DD	N	C	
LHLDW1115FCZZ	1- 24	AD	DJ	N	C	
LHLDW1118FCZZ	9- 29	AA	DD	N	C	
LHLDW1119FCZZ	15- 33	AA	DD	N	C	
LHLDW2126SCZZ	48- 3	AB	DD		C	
〃	56- 3	AB	DD		C	
〃	61- 3	AB	DD		C	
LHLDZ0932FCYZ	24- 12	AD	DJ	N	C	
LHLDZ1076FCZZ	4- 21	AD	DJ	N	C	
LHLDZ1077FCZZ	8- 26	AK	EB	N	C	
LHLDZ1078FCZZ	18- 23	AE	DS	N	C	
LHLDZ1079FCZZ	18- 35	AD	DJ	N	C	
LHLDZ1080FCZZ	7- 13	AC	DJ	N	C	
LHLDZ1081FCZZ	7- 14	AC	DJ	N	C	
〃	47- 13	AC	DJ	N	C	
〃	55- 13	AC	DJ	N	C	
〃	60- 13	AC	DJ	N	C	
LHLDZ1082FCZZ	7- 9	AC	DJ	N	C	
〃	47- 10	AC	DJ	N	C	
〃	55- 10	AC	DJ	N	C	
〃	60- 10	AC	DJ	N	C	
LHLDZ1083FCZZ	25- 12	AF	DS	N	C	
LHLDZ1084FCZZ	25- 6	AE	DS	N	C	
LHLDZ1085FCZZ	3- 1	AD	DJ	N	C	
LHLDZ1086FCZZ	12- 49	AD	DJ	N	C	
LHLDZ1087FCZZ	11- 31	AH	DX	N	C	
LHLDZ1088FCZZ	43- 97	AB	DD	N	C	
LHLDZ1089FCZZ	31- 17	AC	DJ	N	C	
LHLDZ1090FCZZ	30- 4	AC	DJ	N	C	
LHLDZ1092FCZZ	16- 44	AF	DS	N	C	
LHLDZ1094FCZZ	24- 10	AD	DJ	N	C	
LHLDZ1095FCZZ	24- 6	AD	DJ	N	C	
LHLDZ1096FCZZ	18- 27	AD	DJ	N	C	
LHLDZ1098FCZZ	12- 54	AD	DJ	N	C	
LHLDZ1100FCZZ	11- 30	AQ	EZ	N	C	
LHLDZ1103FCZZ	47- 8	AD	DJ	N	C	
〃	55- 8	AD	DJ	N	C	
〃	60- 8	AD	DJ	N	C	
LHLDZ1104FCZZ	14- 19	AC	DJ	N	C	
LHLDZ1105FCZZ	14- 14	AC	DJ	N	C	
LHLDZ1107FCZZ	4- 23	AD	DJ	N	C	
LHLDZ1116FCZZ	4- 14	AD	DJ	N	C	
LPIN-0026MCZZ	16- 57	AA	DD		C	
〃	17- 52	AA	DD		C	
LPINS0075FCZZ	43- 54	AB	DD		C	
〃	49- 3	AB	DD		C	
〃	50- 6	AB	DD		C	
〃	57- 3	AB	DD		C	
〃	62- 3	AB	DD		C	
LPINS0096FCZZ	17- 43	AB	DD		C	
〃	18- 50	AB	DD		C	
〃	26- 10	AB	DD		C	
〃	40- 10	AB	DD		C	
〃	64- 17	AB	DD		C	
〃	66- 10	AB	DD		C	
LPINS0133FCZZ	43- 37	AA	DD		C	
LPINS0134FCZZ	26- 27	AB	DD		C	
〃	40- 27	AB	DD		C	
〃	49- 6	AB	DD		C	
〃	50- 1	AB	DD		C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
LPINS0134FCZZ	57- 6	AB	DD		C	
//	62- 6	AB	DD		C	
//	66- 27	AB	DD		C	
LPINS0155FCZZ	9- 10	AA	DD		C	
//	18- 29	AA	DD		C	
//	19- 7	AA	DD		C	
//	20- 3	AA	DD		C	
//	21- 1	AA	DD		C	
//	43- 91	AA	DD		C	
//	44- 2	AA	DD		C	
LPINS0157FCZZ	28- 14	AB	DD		C	
//	29- 23	AB	DD		C	
//	39- 23	AB	DD		C	
//	52- 23	AB	DD		C	
LPINS0165FCZZ	31- 30	AB	DD		C	
//	43- 71	AB	DD		C	
LPINS0258FCZZ	18- 38	AA	DD	N	C	
LPINS0262FCZZ	20- 47	AB	DD	N	C	
//	21- 24	AB	DD	N	C	
LPINS0263FCZZ	20- 46	AD	DJ	N	C	
LPLTG2539FCZZ	8- 16	AD	DJ		C	
LPLTK4188FCZZ	30- 20	AD	DJ	N	C	
LPLTK4189FCZZ	30- 21	AE	DS	N	C	
LPLTM2573FCZ1	1- 22	AD	DJ		C	
LPLTM3732FCZZ	12- 69	AC	DJ		C	
LPLTM4029FCZZ	9- 37	AG	DS	N	C	
LPLTM4030FCZZ	9- 6	AM	EG	N	C	
LPLTM4032FCZZ	18- 43	AT	FG	N	C	
LPLTM4033FCZZ	7- 5	AE	DJ	N	C	
LPLTM4034FCZZ	18- 12	AK	EB	N	C	
LPLTM4035FCZZ	18- 7	AE	DJ	N	C	
LPLTM4039FCZZ	27- 3	AL	EB	N	C	
//	29- 9	AL	EB	N	C	
//	37- 3	AL	EB	N	C	
//	39- 9	AL	EB	N	C	
//	52- 9	AL	EB	N	C	
LPLTM4041FCZZ	27- 10	AT	FQ	N	C	
//	29- 15	AT	FQ	N	C	
//	37- 10	AT	FQ	N	C	
//	39- 15	AT	FQ	N	C	
//	52- 15	AT	FQ	N	C	
LPLTM4042FCZZ	27- 11	AF	DS	N	C	
//	29- 31	AF	DS	N	C	
//	37- 11	AF	DS	N	C	
//	39- 31	AF	DS	N	C	
//	52- 31	AF	DS	N	C	
LPLTM4042FCZ1	27- 12	AG	DX	N	C	
//	29- 32	AG	DX	N	C	
//	37- 12	AG	DX	N	C	
//	39- 32	AG	DX	N	C	
//	52- 32	AG	DX	N	C	
LPLTM4043FCZZ	28- 18	AF	DS	N	C	
//	29- 29	AF	DS	N	C	
//	39- 29	AF	DS	N	C	
//	52- 29	AF	DS	N	C	
LPLTM4044FCZZ	28- 10	AF	DS	N	C	
//	29- 19	AF	DS	N	C	
//	39- 19	AF	DS	N	C	
//	52- 19	AF	DS	N	C	
LPLTM4046FCZZ	12- 34	AD	DJ	N	C	
LPLTM4047FCZZ	12- 35	AD	DJ	N	C	
LPLTM4048FCZZ	12- 9	AH	DX	N	C	
LPLTM4049FCZZ	12- 68	AC	DJ	N	C	
LPLTM4050FCZZ	12- 50	AD	DJ	N	C	
LPLTM4051FCZZ	11- 40	AB	DD	N	C	
LPLTM4052FCZZ	12- 2	AB	DD	N	C	
LPLTM4053FCZZ	12- 6	AK	EB	N	C	
LPLTM4054FCZZ	12- 53	AB	DD	N	C	
LPLTM4057FCZZ	26- 32	AF	DS	N	C	
//	40- 32	AF	DS	N	C	
//	66- 32	AF	DS	N	C	
LPLTM4059FCZZ	43- 98	AC	DD	N	C	
LPLTM4061FCZZ	43- 47	AF	DS	N	C	
LPLTM4064FCZZ	17- 27	AM	EG	N	C	
LPLTM4065FCZZ	17- 47	AN	EQ	N	C	
LPLTM4066FCZZ	16- 22	AN	EG	N	C	
LPLTM4067FCZZ	24- 8	AN	EG	N	C	
LPLTM4068FCZZ	24- 11	AM	EG	N	C	
LPLTM4075FCZZ	46- 18	AL	EG	N	C	
//	54- 18	AL	EG	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
LPLTM4075FCZZ	59- 18	AL	EG	N	C	
LPLTM4076FCZZ	61- 28	AE	DJ	N	C	
LPLTM4077FCZZ	46- 16	AE	DS	N	C	
//	54- 16	AE	DS	N	C	
//	59- 16	AE	DS	N	C	
LPLTM4079FCZZ	49- 23	AP	EQ	N	C	
//	57- 23	AP	EQ	N	C	
//	62- 23	AP	EQ	N	C	
LPLTM4080FCZZ	48- 10	AL	EB	N	C	
//	56- 10	AL	EB	N	C	
//	61- 10	AL	EB	N	C	
LPLTM4082FCZZ	50- 9	AF	DS	N	C	
LPLTM4083FCZZ	46- 9	AD	DJ	N	C	
//	54- 9	AD	DJ	N	C	
//	59- 9	AD	DJ	N	C	
LPLTM4084FCZZ	46- 8	AD	DJ	N	C	
//	54- 8	AD	DJ	N	C	
//	59- 8	AD	DJ	N	C	
LPLTM4089FCZZ	65- 9	AL	EB	N	C	
LPLTM4090FCZZ	65- 13	AM	EG	N	C	
LPLTM4091FCZZ	65- 11	AM	EG	N	C	
LPLTM4095FCZZ	65- 63	AH	DX	N	C	
LPLTM4096FCZZ	65- 56	AD	DJ	N	C	
LPLTM4098FCZZ	64- 3	AD	DJ	N	C	
LPLTM4101FCZZ	48- 2	AD	DJ	N	C	
//	56- 2	AD	DJ	N	C	
//	61- 2	AD	DJ	N	C	
LPLTM4105FCZZ	18- 21	AC	DD	N	C	
LPLTM4107FCZZ	20- 43	AC	DD	N	C	
LPLTM4109FCZZ	12- 10	AE	DS	N	C	
LPLTM4110FCZZ	43- 110	AE	DS	N	C	
LPLTM4111FCZZ	14- 4	AT	FG	N	C	
LPLTM4112FCZZ	14- 11	AC	DD	N	C	
LPLTM4113FCZZ	9- 8	AF	DS	N	C	
LPLTM4115FCZZ	8- 19	AK	EB	N	C	
//	45- 1	AK	EB	N	C	
//	54- 1	AK	EB	N	C	
//	59- 1	AK	EB	N	C	
LPLTM4116FCZZ	8- 28	AC	DD	N	C	
LPLTM4117FCZZ	46- 5	AF	DS	N	C	
//	54- 5	AF	DS	N	C	
//	59- 5	AF	DS	N	C	
LPLTM4118FCZZ	48- 1	AE	DS	N	C	
//	56- 1	AE	DS	N	C	
//	61- 1	AE	DS	N	C	
LPLTM4123FCZZ	10- 6	AB	DD	N	C	
LPLTM4124FCZZ	10- 1	AC	DJ	N	C	
LPLTM4125FCZZ	46- 25	AP	EQ	N	C	
//	54- 25	AP	EQ	N	C	
//	59- 25	AP	EQ	N	C	
LPLTM4126FCZZ	47- 21	AH	DX	N	C	
//	55- 21	AH	DX	N	C	
//	60- 21	AH	DX	N	C	
LPLTM4149FCZZ	18- 85	AH	DX	N	C	
LPLTM4150FCZZ	4- 19	AC	DD	N	C	
LPLTM4151FCZZ	4- 17	AC	DD	N	C	
LPLTM4153FCZZ	12- 90	AD	DJ	N	C	
LPLTM4154FCZZ	12- 91	AC	DJ	N	C	
LPLTM4168FCZZ	43- 116	AE	DS	N	C	
LPLTM4169FCZZ	43- 80	AK	EB	N	C	
LPLTM4180FCZZ	8- 23	AE	DS	N	C	
LPLTM4203FCZZ	65- 65	AG	DX	N	C	
LPLTP4021FCZZ	18- 44	AK	EB	N	C	
LPLTP4022FCZZ	18- 28	AH	DX	N	C	
LPLTP4023FCZZ	27- 6	AD	DJ	N	C	
//	29- 14	AD	DJ	N	C	
//	37- 6	AD	DJ	N	C	
//	39- 14	AD	DJ	N	C	
//	52- 14	AD	DJ	N	C	
LPLTP4024FCZZ	11- 41	AN	EQ	N	C	
LPLTP4025FCZZ	12- 25	AK	EB	N	C	
LPLTP4026FCZZ	31- 54	AD	DJ	N	C	
LPLTP4070FCZZ	28- 2	AM	EG	N	C	
//	29- 2	AM	EG	N	C	
//	39- 2	AM	EG	N	C	
//	52- 2	AM	EG	N	C	
LPLTP4070FCZ1	28- 2	AK	EB	N	C	
//	39- 2	AK	EB	N	C	
//	52- 2	AK	EB	N	C	
LPLTP4070FCZ2	28- 2	AK	EB	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
LPLTP4070FCZ2	39- 2	AK	EB	N	C	
//	52- 2	AK	EB	N	C	
LPLTP4070FCZ3	65- 2	AK	EB	N	C	
LPLTP4070FCZ4	65- 2	AK	EB	N	C	
LPLTP4070FCZ5	43- 11	AK	EB	N	C	
LPLTP4070FCZ7	65- 2	AK	EB	N	C	
LPLTP4088FCZZ	65- 31	AG	DX	N	C	
LPLTP4092FCZZ	65- 25	AF	DS	N	C	
LPLTP4093FCZZ	65- 29	AE	DS	N	C	
LPLTP4121FCZZ	10- 7	AN	EG	N	C	
LPLTP4122FCZZ	10- 15	AN	EG	N	C	
LPLTZ4069FCZZ	24- 1	AK	EB	N	C	
LRALM0095FCZZ	8- 12	AX	FX	N	C	
LRALM0101FCZZ	12- 12	AM	EG	N	C	
LSOU-0090FCZZ	36- 3	AT	FG		D	
LSOU-0099FCZZ	30- 9	AP	EQ	N	C	
LSOU-0100FCZZ	30- 3	AQ	EZ	N	C	
LSOU-0101FCZZ	30- 2	AN	EQ	N	C	
LSOU-0102FCZZ	30- 1	AG	DX	N	C	
LSTPF0172FCZZ	17- 31	AA	DD		C	
LSTPF0262FCZZ	14- 30	AC	DD		C	
LSTPF0282FCZZ	46- 21	AE	DJ	N	C	
//	54- 21	AE	DJ	N	C	
//	59- 21	AE	DJ	N	C	
LSTPF0283FCZZ	65- 44	AF	DS	N	C	
LSTPF0284FCZZ	65- 40	AF	DS	N	C	
LSTPP0256FCZZ	15- 16	AB	DD		C	
LSTPP0274FCZZ	31- 55	AA	DD	N	C	
LSTPP0275FCZZ	4- 20	AE	DS	N	C	
LSTPP0278FCZZ	31- 14	AC	DD	N	C	
LSTPP0279FCZZ	4- 1	AB	DD	N	C	
//	20- 48	AB	DD	N	C	
//	26- 8	AB	DD	N	C	
//	40- 8	AB	DD	N	C	
//	47- 7	AB	DD	N	C	
//	51- 7	AB	DD	N	C	
//	55- 7	AB	DD	N	C	
//	58- 7	AB	DD	N	C	
//	60- 7	AB	DD	N	C	
//	63- 7	AB	DD	N	C	
//	65- 52	AB	DD	N	C	
//	66- 8	AB	DD	N	C	
LSTPP0281FCZZ	7- 22	AC	DD	N	C	
//	42- 1	AC	DD	N	C	
//	45- 1	AC	DD	N	C	
//	46- 19	AC	DD	N	C	
//	54- 19	AC	DD	N	C	
//	59- 19	AC	DD	N	C	
LSTYM0184FCZZ	6- 7	AL	EG	N	C	
LSTYM0185FCZZ	46- 14	AQ	EZ	N	C	
//	54- 14	AQ	EZ	N	C	
//	59- 14	AQ	EZ	N	C	
LSTYM0186FCZZ	46- 13	AN	EQ	N	C	
//	54- 13	AN	EQ	N	C	
//	59- 13	AN	EQ	N	C	
LSTYM0187FCZZ	56- 20	AF	DS	N	C	
//	61- 20	AF	DS	N	C	
LSTYM0188FCZZ	48- 20	AF	DS	N	C	
LSUPP0060FCZZ	23- 4	AA	DD		C	
LSUPP0076FCZZ	23- 5	AA	DD	N	C	
LSUPP0077FCZZ	48- 29	AB	DD	N	C	
//	56- 29	AB	DD	N	C	
//	61- 29	AB	DD	N	C	
LX-BZ0049FCZZ	12- 46	AB	DD		B	
LX-BZ0102FCZZ	23- 7	AA	DD		C	
LX-BZ0108FCZZ	27- 14	AC	DD		C	
//	37- 14	AC	DD		C	
LX-BZ0138FCZZ	27- 7	AB	DD		C	
//	29- 25	AB	DD		C	
//	37- 7	AB	DD		C	
//	39- 25	AB	DD		C	
//	52- 25	AB	DD		C	
LX-BZ0180FCZZ	18- 3	AA	DD		C	
//	43- 9	AA	DD		C	
//	46- 6	AA	DD		C	
//	48- 12	AA	DD		C	
//	54- 6	AA	DD		C	
//	56- 12	AA	DD		C	
//	59- 6	AA	DD		C	
//	61- 12	AA	DD		C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
LX-BZ0180FCZZ	65- 39	AA	DD		C	
LX-BZ0193FCZZ	43- 101	AB	DD		C	
LX-BZ0266FCZZ	12- 11	AB	DD		C	
//	12- 84	AB	DD		C	
//	17- 19	AB	DD		C	
LX-BZ0319FCZZ	47- 26	AC	DD		C	
LX-BZ0324FCZZ	12- 83	AA	DD		C	
LX-BZ0326FCZZ	43- 95	AA	DD		C	
LX-BZ0335FCZZ	11- 39	AA	DD		C	
//	12- 20	AA	DD		C	
LX-BZ0339FCZZ	11- 3	AA	DD		C	
LX-BZ0373FCZZ	17- 26	AA	DD		C	
LX-BZ0414FCZZ	9- 28	AB	DD		C	
//	22- 7	AB	DD		C	
LX-BZ0426FCZZ	36- 7	AA	DD		C	
LX-BZ0465FCZZ	7- 20	AA	DD		C	
//	43- 115	AA	DD		C	
//	59- 31	AA	DD		C	
LX-BZ0503FCZZ	8- 14	AA	DD		C	
LX-BZ0529FCZZ	14- 31	AA	DD		C	
//	15- 4	AA	DD		C	
LX-BZ0536FCZZ	61- 27	AB	DD		C	
LX-BZ0581FCZZ	20- 36	AB	DD		C	
LX-BZ0583FCZZ	20- 8	AB	DD		C	
LX-BZ0586FCZZ	12- 82	AA	DD		C	
LX-BZ0637FCZZ	12- 16	AC	DJ		C	
LX-BZ0649FCZZ	36- 8	AB	DD	N	C	
LX-BZ0650FCZZ	36- 9	AB	DD	N	C	
LX-BZ0651FCZZ	36- 10	AB	DD	N	C	
LX-BZ0653FCZZ	8- 30	AB	DD	N	C	
LX-BZ0654FCZZ	11- 21	AG	DS	N	C	
LX-BZ0656FCZZ	16- 4	AD	DJ	N	C	
//	16- 48	AD	DJ	N	C	
LX-BZ0658FCZZ	65- 8	AC	DD	N	C	
LX-BZ0659FCZZ	9- 48	AB	DD		C	
//	20- 40	AB	DD	N	C	
//	31- 51	AB	DD		C	
LX-BZ0660FCZZ	12- 66	AC	DJ	N	C	
LX-BZ0661FCZZ	17- 51	AC	DD	N	C	
LX-BZ0663FCZZ	61- 26	AD	DJ		C	
LX-BZ0667FCZZ	8- 18	AB	DD	N	C	
LX-BZ0669FCZZ	8- 10	AC	DD	N	C	
LX-BZ0671FCZZ	17- 64	AD	DJ	N	C	
LX-BZ3006SC0M	65- 54	AA	DD		C	
LX-BZ4008SC0M	24- 13	AA	DD		B	
LX-BZ4010SC0M	68- 20	AA	DD		C	
LX-BZ7025XCZZ	46- 17	AB	DD		C	
//	54- 17	AB	DD		C	
//	59- 17	AB	DD		C	
LX-WZ0017FCZZ	18- 56	AA	DD		C	
//	20- 29	AA	DD		C	
LX-WZ0031FCZZ	22- 4	AA	DD		C	
LX-WZ0050FCZZ	11- 26	AA	DD		C	
LX-WZ0057FCZZ	12- 17	AA	DD		C	
LX-WZ0064FCZZ	15- 15	AA	DD		C	
LX-WZ0077FCZZ	48- 13	AA	DD		C	
//	56- 13	AA	DD		C	
//	61- 13	AA	DD		C	
//	65- 34	AA	DD		C	
LX-WZ0094FCZZ	20- 25	AA	DD		B	
LX-WZ0131FCZZ	17- 39	AA	DD		C	
LX-WZ0134FCZZ	11- 27	AA	DD		C	
LX-WZ0213FCZZ	11- 51	AA	DD		C	
LX-WZ0225FCZZ	15- 20	AA	DD		C	
LX-WZ0316FCZZ	16- 5	AA	DD	N	C	
LX-WZ0317FCZZ	27- 2	AA	DD	N	C	
//	29- 13	AA	DD	N	C	
//	37- 2	AA	DD	N	C	
//	39- 13	AA	DD	N	C	
//	52- 13	AA	DD	N	C	
LX-WZ0322FCZZ	20- 5	AA	DD	N	C	
LX-WZ1012CCZZ	65- 58	AB	DD		C	
[M]						
MARMM0153FCZZ	8- 31	AD	DJ	N	C	
MARMP0116FCZZ	31- 13	AC	DJ		C	
MARMP0117FCZZ	31- 34	AD	DJ		C	
MARMP0118FCZZ	31- 32	AC	DJ		C	
MARMP0147FCZZ	3- 7	AK	EB	N	C	
MARMP0148FCZZ	3- 10	AH	DX	N	C	
MARMP0149FCZZ	43- 86	AH	DX	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
MARMP0150FCZZ	43- 84	AB	DD	N	C	
MARMP0151FCZZ	15- 2	AB	DD	N	C	
MHNG-0086FCZZ	5- 3	AL	EG		C	
MHNG-0096FCZZ	5- 4	AL	EG		C	
MHNG-0157FCZZ	1- 3	AD	DJ	N	C	
MLEVF0597FCZZ	17- 55	AD	DJ	N	C	
MLEVF0610FCZZ	8- 32	AF	DS	N	C	
MLEVP0484FCZZ	31- 5	AB	DD		C	
MLEVP0582FCZZ	9- 42	AC	DJ	N	C	
MLEVP0583FCZZ	18- 54	AD	DJ	N	C	
MLEVP0584FCZZ	18- 36	AG	DX	N	C	
MLEVP0585FCZZ	18- 45	AC	DJ	N	C	
MLEVP0586FCZZ	26- 7	AC	DJ	N	C	
〃	40- 7	AC	DJ	N	C	
〃	66- 7	AC	DJ	N	C	
MLEVP0588FCZZ	26- 17	AB	DD	N	C	
〃	40- 17	AB	DD	N	C	
〃	66- 17	AB	DD	N	C	
MLEVP0589FCZZ	26- 3	AC	DD	N	C	
〃	40- 3	AC	DD	N	C	
〃	66- 3	AC	DD	N	C	
MLEVP0591FCZZ	43- 30	AB	DD	N	C	
MLEVP0592FCZZ	31- 21	AC	DD	N	C	
MLEVP0593FCZZ	31- 22	AC	DD	N	C	
MLEVP0594FCZZ	4- 8	AD	DJ	N	C	
MLEVP0595FCZZ	4- 7	AF	DS	N	C	
〃	51- 6	AF	DS	N	C	
〃	58- 6	AF	DS	N	C	
〃	63- 6	AF	DS	N	C	
MLEVP0596FCZZ	16- 36	AD	DJ	N	C	
MLEVP0598FCZZ	51- 5	AE	DJ	N	C	
〃	58- 5	AE	DJ	N	C	
〃	63- 5	AE	DJ	N	C	
MLEVP0600FCZZ	18- 51	AD	DJ	N	C	
MLEVP0601FCZZ	26- 15	AC	DJ	N	C	
〃	40- 15	AC	DJ	N	C	
〃	66- 15	AC	DJ	N	C	
MLEVP0602FCZZ	43- 112	AC	DJ	N	C	
MLEVP0603FCZZ	15- 5	AH	DX	N	C	
MLEVP0605FCZZ	8- 11	AD	DJ	N	C	
MLEVP0606FCZZ	6- 14	AH	DX	N	C	
MLEVP0608FCZZ	51- 2	AE	DJ	N	C	
〃	58- 2	AE	DJ	N	C	
〃	63- 2	AE	DJ	N	C	
MLEVP0609FCZZ	31- 15	AC	DD	N	C	
MSPRC1006FCZZ	43- 35	AC	DJ		C	
MSPRC1289FCZZ	11- 45	AA	DD		C	
〃	12- 65	AA	DD		C	
MSPRC1315FCZZ	31- 44	AD	DJ		C	
MSPRC1317FCZZ	31- 7	AA	DD		C	
MSPRC1318FCZZ	31- 3	AA	DD		C	
MSPRC1442FCZZ	31- 27	AB	DD		C	
MSPRC1544FCZZ	31- 39	AE	DS		C	
MSPRC1811FCZZ	16- 35	AA	DD		C	
MSPRC1863FCZZ	18- 55	AA	DD		C	
MSPRC1869FCZZ	43- 50	AB	DD		C	
MSPRC1940FCZZ	20- 34	AA	DD	N	C	
MSPRC1941FCZZ	22- 3	AA	DD	N	C	
MSPRC1942FCZZ	26- 18	AB	DD	N	C	
〃	40- 18	AB	DD	N	C	
〃	66- 18	AB	DD	N	C	
MSPRC1943FCZZ	26- 36	AB	DD	N	C	
〃	40- 36	AB	DD	N	C	
〃	66- 36	AB	DD	N	C	
MSPRC1947FCZZ	31- 52	AA	DD	N	C	
MSPRC1948FCZZ	4- 5	AB	DD	N	C	
〃	51- 9	AB	DD	N	C	
〃	58- 9	AB	DD	N	C	
〃	63- 9	AB	DD	N	C	
MSPRC1954FCZZ	17- 40	AB	DD	N	C	
MSPRC1959FCZZ	16- 6	AA	DD	N	C	
MSPRC1964FCZZ	64- 23	AC	DD	N	C	
MSPRC1965FCZZ	18- 5	AC	DD	N	C	
MSPRC1967FCZZ	44- 15	AA	DD	N	C	
MSPRC1968FCZZ	30- 11	AA	DD	N	C	
MSPRC1969FCZZ	26- 40	AF	DS	N	C	
〃	40- 40	AF	DS	N	C	
〃	66- 40	AF	DS	N	C	
MSPRC1973FCZZ	6- 16	AA	DD	N	C	
MSPRC1975FCZZ	61- 24	AA	DD	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
MSPRC1980FCZZ	20- 39	AB	DD	N	C	
MSPRC1981FCZZ	46- 7	AB	DD	N	C	
〃	54- 7	AB	DD	N	C	
〃	59- 7	AB	DD	N	C	
MSPRC2001FCZZ	20- 28	AB	DD	N	C	
MSPRC2012FCZZ	26- 22	AD	DJ	N	C	
〃	40- 22	AD	DJ	N	C	
〃	66- 22	AD	DJ	N	C	
MSPRD1945FCZZ	43- 85	AB	DD	N	C	
MSPRD1949FCZZ	4- 9	AB	DD	N	C	
〃	51- 3	AB	DD	N	C	
〃	58- 3	AB	DD	N	C	
〃	63- 3	AB	DD	N	C	
MSPRP1293FCZZ	20- 10	AB	DD		C	
MSPRP1426FCZZ	20- 11	AB	DD		C	
MSPRP1520FCZZ	6- 11	AD	DJ		C	
MSPRP1550FCZZ	25- 11	AA	DD		C	
MSPRP1591FCZZ	10- 10	AC	DD		B	
MSPRP1932FCZZ	18- 24	AD	DJ	N	C	
MSPRP1933FCZZ	25- 9	AC	DD	N	C	
MSPRP1950FCZZ	6- 13	AA	DD	N	C	
MSPRP1976FCZZ	10- 4	AD	DJ	N	C	
MSPRP1977FCZZ	10- 16	AG	DS	N	C	
MSPRT0513FCZZ	25- 13	AA	DD		B	
MSPRT0842FCZZ	11- 35	AC	DD		C	
MSPRT0925FCZZ	9- 49	AB	DD		C	
MSPRT1324FCZZ	43- 63	AA	DD		C	
MSPRT1328FCZZ	16- 46	AA	DD		C	
MSPRT1563FCZZ	3- 4	AC	DD		C	
MSPRT1639FCZZ	43- 108	AA	DD		C	
MSPRT1646FCZZ	18- 60	AB	DD		C	
MSPRT1813FCZZ	15- 17	AA	DD		C	
MSPRT1934FCZZ	43- 32	AA	DD	N	C	
MSPRT1938FCZZ	18- 26	AB	DD	N	C	
MSPRT1939FCZZ	7- 18	AB	DD	N	C	
〃	47- 15	AB	DD	N	C	
〃	55- 15	AB	DD	N	C	
〃	60- 15	AB	DD	N	C	
MSPRT1944FCZZ	43- 5	AA	DD	N	C	
MSPRT1951FCZZ	17- 45	AC	DD	N	C	
MSPRT1952FCZZ	17- 28	AA	DD	N	C	
MSPRT1953FCZZ	17- 49	AA	DD	N	C	
MSPRT1955FCZZ	17- 21	AC	DD	N	C	
MSPRT1960FCZZ	47- 6	AA	DD	N	C	
〃	55- 6	AA	DD	N	C	
〃	60- 6	AA	DD	N	C	
MSPRT1961FCZZ	65- 33	AB	DD	N	C	
MSPRT1962FCZZ	65- 57	AB	DD	N	C	
MSPRT1974FCZZ	8- 27	AB	DD	N	C	
MSPRT1982FCZZ	21- 17	AB	DD	N	C	
MSPRT1983FCZZ	8- 9	AB	DD	N	C	
MSPRT1984FCZZ	18- 46	AB	DD	N	C	
MSPRT1999FCZZ	43- 31	AA	DD	N	C	
MSPRT2000FCZZ	4- 18	AB	DD	N	C	
MSPRT2005FCZZ	15- 30	AC	DD	N	C	
MSPRT2008FCZZ	9- 43	AA	DD	N	C	
[N]						
NBLTH0170FCZZ	18- 31	AH	DX		B	
NBLTH0182FCZZ	9- 12	AH	DX	N	B	
NBLTH0183FCZZ	20- 24	AK	EB	N	B	
NBLTH0184FCZZ	21- 16	AF	DS	N	B	
NBLTH0185FCZZ	21- 8	AF	DS	N	B	
NBLTH0186FCZZ	43- 27	AF	DS	N	B	
NBLTH0187FCZZ	43- 88	AE	DS	N	B	
NBLTH0188FCZZ	43- 73	AF	DS	N	B	
NBLTH0189FCZZ	43- 72	AF	DS	N	B	
NBLTH0190FCZZ	43- 25	AG	DS	N	B	
NBLTH0191FCZZ	43- 56	AG	DS	N	B	
NBLTH0192FCZZ	49- 19	AH	DX	N	B	
〃	57- 19	AH	DX	N	B	
〃	62- 19	AH	DX	N	B	
NBLTH0193FCZZ	48- 16	AH	DX	N	B	
〃	49- 18	AH	DX	N	B	
〃	57- 18	AH	DX	N	B	
〃	62- 18	AH	DX	N	B	
NBLTH0194FCZZ	56- 14	AK	EB	N	B	
〃	61- 14	AK	EB	N	B	
NBLTH0195FCZZ	48- 15	AH	DX	N	B	
NBLTH0197FCZZ	64- 9	AF	DS	N	B	
NBLTH0198FCZZ	48- 14	AH	DX	N	B	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
NBRGC0037FCZZ	18- 59	AF	DJ		B	
NBRGC0066FCZZ	18- 47	AE	DJ		C	
NBRGC0069FCZZ	6- 21	AB	DD		C	
NBRGC0080FCZZ	43- 90	AD	DJ		C	
//	44- 8	AD	DJ		C	
NBRGC0136FCZZ	14- 7	AC	DD		B	
NBRGC0140FCZZ	14- 20	AD	DJ		B	
NBRGC0167FCZZ	26- 26	AB	DD		C	
//	28- 15	AB	DD		C	
//	29- 24	AB	DD		C	
//	39- 24	AB	DD		C	
//	40- 26	AB	DD		C	
//	52- 24	AB	DD		C	
//	66- 26	AB	DD		C	
NBRGC0188FCZZ	17- 44	AB	DD		B	
//	43- 70	AB	DD		B	
NBRGC0254FCZZ	12- 21	AB	DD		C	
//	18- 15	AB	DD		C	
NBRGC0319FCZZ	19- 8	AD	DJ		C	
NBRGC0344FCZZ	43- 22	AC	DD		C	
NBRGC0387FCZZ	12- 4	AB	DD		B	
NBRGC0455FCZZ	11- 49	AC	DD	N	C	
NBRGC0456FCZZ	11- 50	AB	DD	N	C	
NBRGC0457FCZZ	26- 28	AD	DJ	N	C	
//	40- 28	AD	DJ	N	C	
//	66- 28	AD	DJ	N	C	
NBRGC0467FCZZ	21- 23	AD	DJ	N	C	
NBRGC0468FCZZ	21- 22	AE	DJ	N	C	
NBRGC2019SCZZ	20- 44	AC	DJ		B	
//	21- 4	AC	DJ		B	
//	43- 46	AC	DJ		C	
//	49- 4	AC	DJ		B	
//	50- 5	AC	DJ		B	
//	57- 4	AC	DJ		B	
//	62- 4	AC	DJ		B	
//	64- 7	AC	DJ		C	
//	65- 23	AC	DJ		C	
NBRGC2029SCZZ	12- 60	AB	DD		C	
NBRGM1040HCZZ	6- 2	AC	DJ		C	
NBRGP0266FCZZ	16- 43	AA	DD		C	
//	31- 26	AA	DD		C	
NBRGP0299FCZZ	15- 23	AC	DJ		B	
//	16- 52	AC	DJ		B	
NBRGP0321FCZZ	16- 28	AD	DJ		B	
NBRGY0295FCZZ	17- 32	AR	EZ		C	
NBRGY0296FCZZ	17- 36	AK	EB		C	
NBRGY0466FCZZ	20- 4	AK	EB	N	B	
NCPL-0013FCZZ	21- 3	AC	DD	N	C	
//	49- 7	AC	DD	N	C	
//	50- 7	AC	DD	N	C	
//	57- 7	AC	DD	N	C	
//	62- 7	AC	DD	N	C	
NCPL-0014FCZZ	49- 5	AC	DJ	N	C	
//	50- 2	AC	DJ	N	C	
//	57- 5	AC	DJ	N	C	
//	62- 5	AC	DJ	N	C	
NCPL-0015FCZZ	64- 24	AE	DJ	N	C	
NGERH0049FCZZ	20- 17	AD	DJ		A	
NGERH0071FCZZ	44- 6	AD	DJ		C	
NGERH0111FCZZ	20- 35	AD	DJ		C	
NGERH0128FCZZ	44- 9	AC	DD		C	
NGERH0140FCZZ	43- 100	AC	DD		C	
NGERH0188FCZZ	18- 17	AD	DJ		A	
NGERH0193FCZZ	30- 14	AB	DD		C	
NGERH0194FCZZ	6- 19	AB	DD		C	
NGERH0205FCZZ	44- 12	AC	DD		C	
NGERH0209FCZZ	43- 74	AC	DD		C	
NGERH0209FCZ1	16- 51	AB	DD		C	
NGERH0275FCZZ	43- 104	AE	DS		C	
NGERH0295FCZZ	43- 105	AC	DJ		C	
NGERH0314FCZZ	18- 37	AC	DD		C	
NGERH0317FCZZ	18- 57	AC	DJ		C	
//	19- 13	AC	DJ		C	
//	21- 13	AC	DJ		C	
NGERH0349FCZZ	19- 6	AC	DD		C	
NGERH0408FCZZ	16- 55	AB	DD		C	
NGERH0417FCZZ	16- 56	AC	DJ		C	
NGERH0457FCZZ	19- 3	AC	DD		C	
//	20- 18	AC	DD		C	
//	21- 14	AC	DD		C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
NGERH0457FCZZ	44- 10	AC	DD		C	
//	49- 12	AC	DD		C	
//	57- 12	AC	DD		C	
//	62- 12	AC	DD		C	
NGERH0475FCZZ	17- 57	AK	EB		C	
NGERH0480FCZZ	16- 54	AC	DJ		C	
NGERH0495FCZZ	31- 31	AC	DD		C	
NGERH0562FCZZ	43- 103	AD	DJ		C	
NGERH0612FCZZ	43- 21	AD	DJ		C	
NGERH0613FCZZ	43- 28	AD	DJ		C	
NGERH0621FCZZ	17- 60	AD	DJ		C	
NGERH0845FCZZ	20- 26	AM	EG	N	C	
NGERH0846FCZZ	20- 2	AF	DS	N	C	
NGERH0847FCZZ	20- 33	AD	DJ	N	C	
NGERH0848FCZZ	20- 30	AC	DJ	N	C	
NGERH0849FCZZ	20- 22	AE	DJ	N	C	
NGERH0850FCZZ	22- 2	AC	DD	N	C	
NGERH0851FCZZ	44- 1	AD	DJ	N	C	
NGERH0852FCZZ	19- 15	AE	DJ	N	C	
NGERH0853FCZZ	19- 11	AE	DJ	N	C	
NGERH0854FCZZ	19- 14	AE	DS	N	C	
NGERH0855FCZZ	19- 16	AE	DS	N	C	
NGERH0856FCZZ	19- 10	AE	DS	N	C	
NGERH0857FCZZ	19- 2	AE	DJ	N	C	
NGERH0859FCZZ	28- 13	AD	DJ	N	C	
//	29- 22	AD	DJ	N	C	
//	39- 22	AD	DJ	N	C	
//	52- 22	AD	DJ	N	C	
NGERH0860FCZZ	12- 8	AN	EG	N	C	
NGERH0861FCZZ	26- 11	AB	DD	N	C	
//	40- 11	AB	DD	N	C	
//	66- 11	AB	DD	N	C	
NGERH0862FCZZ	26- 6	AB	DD	N	C	
//	40- 6	AB	DD	N	C	
//	66- 6	AB	DD	N	C	
NGERH0863FCZZ	26- 5	AB	DD	N	C	
//	40- 5	AB	DD	N	C	
//	66- 5	AB	DD	N	C	
NGERH0864FCZZ	31- 41	AC	DD	N	C	
NGERH0866FCZZ	17- 53	AC	DD	N	C	
NGERH0867FCZZ	6- 26	AC	DD	N	C	
NGERH0868FCZZ	16- 27	AC	DD	N	C	
NGERH0869FCZZ	49- 15	AC	DD	N	C	
//	57- 15	AC	DD	N	C	
//	62- 15	AC	DD	N	C	
NGERH0870FCZZ	49- 16	AC	DD	N	C	
//	57- 16	AC	DD	N	C	
//	62- 16	AC	DD	N	C	
NGERH0871FCZZ	65- 60	AB	DD	N	C	
NGERH0872FCZZ	65- 49	AP	EQ	N	C	
NGERH0875FCZZ	64- 20	AC	DJ	N	C	
NGERH0876FCZZ	64- 15	AC	DJ	N	C	
NGERH0879FCZZ	14- 21	AC	DJ	N	C	
NGERH0880FCZZ	14- 24	AC	DJ	N	C	
NGERH0881FCZZ	14- 27	AC	DD	N	C	
NGERH0884FCZZ	15- 34	AC	DD	N	C	
NGERH0885FCZZ	15- 37	AC	DD	N	C	
NGERH0886FCZZ	15- 35	AC	DD	N	C	
NGERH0892FCZZ	31- 29	AB	DD	N	C	
NGERR0614FCZZ	43- 29	AH	DX		C	
NGERR0878FCZZ	30- 12	AD	DJ	N	C	
NGERW0873FCZZ	64- 10	AE	DJ	N	C	
NGERW0874FCZZ	64- 18	AE	DS	N	C	
NPLYZ0106FCZZ	43- 87	AC	DJ		C	
NPLYZ0146FCZZ	43- 18	AB	DD		C	
NPLYZ0167FCZZ	11- 2	AF	DS		C	
//	12- 43	AF	DS		C	
NPLYZ0172FCZ1	12- 45	AL	EB		C	
NPLYZ0181FCZZ	12- 48	AB	DD		C	
NPLYZ0258FCZZ	9- 11	AC	DJ	N	C	
//	20- 19	AC	DJ	N	C	
NPLYZ0259FCZZ	20- 37	AC	DD	N	C	
NPLYZ0260FCZZ	21- 15	AC	DD	N	C	
//	43- 53	AC	DD	N	C	
NPLYZ0261FCZZ	21- 6	AC	DD	N	C	
NPLYZ0262FCZZ	11- 44	AF	DS	N	C	
//	12- 72	AF	DS	N	C	
NPLYZ0263FCZZ	11- 47	AB	DD	N	C	
//	12- 67	AB	DD	N	C	
NPLYZ0264FCZZ	48- 11	AC	DJ	N	C	

SF2027

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
NPLYZ0264FCZZ	56- 11	AC	DJ	N	C
〃	61- 11	AC	DJ	N	C
NPLYZ0265FCZZ	49- 2	AC	DD	N	C
〃	50- 15	AC	DD	N	C
〃	57- 2	AC	DD	N	C
〃	62- 2	AC	DD	N	C
NPLYZ0266FCZZ	49- 11	AC	DJ	N	C
〃	50- 12	AC	DJ	N	C
〃	57- 11	AC	DJ	N	C
〃	62- 11	AC	DJ	N	C
NPLYZ0267FCZZ	65- 18	AC	DD	N	C
NPLYZ0268FCZZ	65- 22	AC	DJ	N	C
NPLYZ0269FCZZ	64- 12	AH	DX	N	C
NPLYZ0270FCZZ	21- 10	AC	DD	N	C
NPLYZ0271FCZZ	20- 31	AF	DS	N	C
NPLYZ0272FCZZ	65- 51	AD	DJ	N	C
NPLYZ0273FCZZ	20- 32	AH	DX	N	C
NRÖLI0583FCZZ	17- 35	BE	HC		C
NRÖLM0915FCZZ	14- 18	BG	HL	N	C
NRÖLP0487FCZZ	18- 30	AB	DD		C
NRÖLP0512FCZZ	43- 62	AB	DD		C
NRÖLP0833FCZ1	18- 33	AC	DD		C
NRÖLP0896FCZZ	4- 3	AC	DD	N	C
〃	47- 4	AC	DD	N	C
〃	51- 8	AC	DD	N	C
〃	55- 4	AC	DD	N	C
〃	58- 8	AC	DD	N	C
〃	60- 4	AC	DD	N	C
〃	63- 8	AC	DD	N	C
NRÖLP0898FCZZ	18- 61	AT	FG	N	C
NRÖLP0916FCZZ	49- 13	AB	DD	N	C
〃	50- 13	AB	DD	N	C
〃	57- 13	AB	DD	N	C
〃	62- 13	AB	DD	N	C
NRÖLP0918FCZZ	14- 3	AQ	EZ	N	C
NRÖLP0919FCZZ	14- 1	AM	EG	N	C
NRÖLP0923FCZZ	6- 15	AC	DD	N	C
NRÖLP0933FCZZ	4- 16	AE	DS	N	C
NRÖLP0937FCZZ	6- 15	AC	DJ	N	C
NRÖLR0899FCZZ	18- 58	AX	FX	N	C
NRÖLR0901FCZZ	26- 9	AR	EZ	N	C
〃	40- 9	AR	EZ	N	C
〃	43- 118	AR	EZ	N	C
〃	66- 9	AR	EZ	N	C
NRÖLR0902FCZZ	26- 37	AK	EB	N	C
〃	40- 37	AK	EB	N	C
〃	66- 37	AK	EB	N	C
NRÖLR0903FCZZ	43- 96	AR	EZ	N	C
NRÖLR0904FCZZ	43- 83	AP	EQ	N	C
NRÖLR0905FCZZ	43- 75	AN	EQ	N	C
NRÖLR0906FCZZ	43- 76	AP	EQ	N	C
NRÖLR0907FCZZ	43- 77	AP	EQ	N	C
NRÖLR0909FCZZ	43- 34	AK	EB	N	C
NRÖLR0910FCZZ	6- 28	AN	EG	N	C
NRÖLR0911FCZZ	17- 46	AP	EQ	N	C
NRÖLR0920FCZZ	26- 4	AK	EB	N	C
〃	40- 4	AK	EB	N	C
〃	66- 4	AK	EB	N	C
NRÖLR0922FCZZ	31- 33	AR	EZ	N	C
NRÖLT0913FCZZ	17- 34	BD	GT	N	C
NSFTZ1595FCZZ	18- 11	AD	DJ		C
NSFTZ1734FCZZ	18- 39	AH	DX	N	C
NSFTZ1735FCZZ	4- 10	AN	EG	N	C
〃	51- 4	AN	EG	N	C
〃	58- 4	AN	EG	N	C
〃	63- 4	AN	EG	N	C
NSFTZ1736FCZZ	18- 14	AM	EG	N	C
NSFTZ1737FCZZ	18- 34	AG	DS	N	C
NSFTZ1743FCZZ	20- 21	AG	DX	N	C
NSFTZ1745FCZZ	20- 23	AH	DX	N	C
NSFTZ1748FCZZ	21- 12	AG	DX	N	C
NSFTZ1749FCZZ	21- 2	AF	DS	N	C
NSFTZ1750FCZZ	21- 11	AG	DS	N	C
NSFTZ1751FCZZ	21- 5	AD	DJ	N	C
NSFTZ1752FCZZ	22- 1	AD	DJ	N	C
NSFTZ1753FCZZ	44- 7	AH	DX	N	C
NSFTZ1754FCZZ	44- 4	AG	DX	N	C
NSFTZ1755FCZZ	19- 12	AM	EG	N	C
NSFTZ1760FCZZ	28- 19	AM	EG	N	C
〃	29- 30	AM	EG	N	C

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
NSFTZ1760FCZZ	39- 30	AM	EG	N	C
〃	52- 30	AM	EG	N	C
NSFTZ1761FCZZ	12- 74	AN	EG	N	C
NSFTZ1762FCZZ	11- 32	AF	DS	N	C
NSFTZ1763FCZZ	12- 47	AR	EZ	N	C
NSFTZ1764FCZZ	26- 13	AM	EG	N	C
〃	40- 13	AM	EG	N	C
〃	66- 13	AM	EG	N	C
NSFTZ1765FCZZ	26- 38	AH	DX	N	C
〃	40- 38	AH	DX	N	C
〃	66- 38	AH	DX	N	C
NSFTZ1766FCZZ	26- 2	AD	DJ	N	C
〃	40- 2	AD	DJ	N	C
〃	66- 2	AD	DJ	N	C
NSFTZ1767FCZZ	43- 33	AH	DX	N	C
NSFTZ1768FCZZ	43- 117	AH	DX	N	C
NSFTZ1769FCZZ	43- 89	AQ	EQ	N	C
NSFTZ1770FCZZ	43- 48	AH	DX	N	C
NSFTZ1774FCZZ	31- 35	AH	DX	N	C
NSFTZ1775FCZZ	4- 4	AK	EB	N	C
〃	47- 5	AK	EB	N	C
〃	51- 10	AK	EB	N	C
〃	55- 5	AK	EB	N	C
〃	58- 10	AK	EB	N	C
〃	60- 5	AK	EB	N	C
〃	63- 10	AK	EB	N	C
NSFTZ1778FCZZ	17- 56	AK	EB	N	C
NSFTZ1781FCZZ	49- 22	AL	EB	N	C
〃	57- 22	AL	EB	N	C
〃	62- 22	AL	EB	N	C
NSFTZ1782FCZZ	49- 20	AB	DD	N	C
〃	57- 20	AB	DD	N	C
〃	62- 20	AB	DD	N	C
NSFTZ1785FCZZ	49- 17	AH	DX	N	C
〃	57- 17	AH	DX	N	C
〃	62- 17	AH	DX	N	C
NSFTZ1786FCZZ	49- 9	AL	EG	N	C
〃	57- 9	AL	EG	N	C
〃	62- 9	AL	EG	N	C
NSFTZ1787FCZZ	50- 14	AK	EB	N	C
NSFTZ1788FCZZ	50- 8	AH	DX	N	C
NSFTZ1791FCZZ	65- 42	AV	FQ	N	C
NSFTZ1794FCZZ	64- 11	AL	EB	N	C
NSFTZ1797FCZZ	64- 16	AK	EB	N	C
NSFTZ1800FCZZ	44- 18	AG	DX	N	C
NSFTZ1802FCZZ	15- 31	AC	DD	N	C
NSFTZ1803FCZZ	15- 25	AE	DS	N	C
NSFTZ1805FCZZ	3- 2	AE	DS	N	C
NSFTZ1806FCZZ	31- 48	AD	DJ	N	C
NSFTZ1825FCZZ	4- 12	AD	DJ	N	C
NSRW-0015FCZZ	16- 38	AH	DX	N	C
NSRW-0016FCZZ	16- 49	AG	DS	N	C
〔P〕					
PAJS-0009FCZZ	46- 28	AD	DJ		C
〃	54- 28	AD	DJ		C
〃	59- 28	AD	DJ		C
PBÖX-0090FCZZ	15- 39	AP	EQ	N	C
PBRKS0046FCZZ	65- 55	AC	DD	N	C
PBRSS0093FCZZ	17- 30	AB	DD		C
PBRSS0118FCZZ	6- 17	AG	DX	N	C
PBRSS0119FCZZ	43- 114	AF	DS	N	B
PBRSS0121FCZZ	43- 113	AE	DS	N	B
PBRSS0122FCZZ	43- 81	AE	DJ	N	B
PCASZ0235FCZZ	25- 10	AL	EB	N	C
PCLC-0129FCZZ	43- 102	AV	FQ		C
PCLC-0190FCZZ	43- 52	AC	DD		C
PCLC-0204FCZZ	18- 53	AW	FQ	N	C
PCLC-0207FCZZ	43- 106	AW	FQ	N	C
PCLC-0208FCZZ	26- 25	AW	FQ	N	C
〃	40- 25	AW	FQ	N	C
〃	66- 25	AW	FQ	N	C
PCLC-0210FCZZ	44- 5	AW	FQ	N	C
〃	49- 21	AW	FQ	N	C
〃	57- 21	AW	FQ	N	C
〃	62- 21	AW	FQ	N	C
PCLR-0230FCZZ	43- 36	AD	DJ		C
PCLR-0301FCZZ	6- 10	AB	DD		C
PCLR-0367FCZZ	9- 13	AC	DD	N	C
〃	20- 20	AC	DD	N	C
PCLR-0368FCZZ	12- 55	AB	DD	N	C

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
PCLR-0370FCZZ	43- 109	AC	DD	N	C	
PCLR-0371FCZZ	14- 12	AG	DS	N	C	
PCLR-0373FCZZ	26- 42	AC	DD	N	C	
//	40- 42	AC	DD	N	C	
//	66- 42	AC	DD	N	C	
PCLR-0374FCZZ	11- 22	AC	DD	N	C	
PCLR-0377FCZZ	20- 49	AC	DD	N	C	
PCŌVP0911FCZZ	3- 21	AB	DD		C	
PCŌVP0941FCZZ	3- 22	AB	DD		C	
PCŌVP1124FCZZ	1- 10	BA	GJ	N	C	
PCŌVP1125FCZZ	1- 5	AQ	EZ	N	C	
//	46- 3	AQ	EZ	N	C	
//	54- 3	AQ	EZ	N	C	
//	59- 3	AQ	EZ	N	C	
PCŌVP1129FCZZ	43- 8	AK	EB	N	C	
PCŌVP1130FCZZ	24- 4	AB	DD	N	C	
PCŌVP1131FCZZ	12- 56	AT	FG	N	C	
PCŌVP1133FCZZ	17- 3	AU	FQ	N	C	
PCŌVP1134FCZZ	25- 14	AB	DD	N	C	
PCŌVP1135FCZZ	25- 2	AB	DD	N	C	
PCŌVP1136FCZZ	65- 19	AV	FQ	N	C	
PCŌVP1137FCZZ	65- 7	AV	FQ	N	C	
PCŌVP1138FCZZ	15- 14	AU	FQ	N	C	
PCŌVP1139FCZZ	15- 3	AF	DS	N	C	
PCŌVP1140FCZZ	15- 1	AE	DS	N	C	
PCŌVP1141FCZZ	15- 24	AC	DD	N	C	
PCŌVP1142FCZZ	26- 41	AC	DD	N	C	
//	40- 41	AC	DD	N	C	
//	66- 41	AC	DD	N	C	
PCŌVP1143FCZZ	8- 24	AE	DJ	N	C	
PCŌVP1150FCZZ	55- 23	AL	EG	N	C	
//	60- 23	AL	EG	N	C	
PCŌVP1151FCZZ	36- 11	AK	EB	N	C	
PCŌVP1154FCZZ	26- 20	AD	DJ	N	C	
//	40- 20	AD	DJ	N	C	
//	66- 20	AD	DJ	N	C	
PCŌVQ1152FCZZ	18- 81	AG	DS	N	C	
PCUSS0201FCZZ	11- 5	AA	DD		C	
PCUSU0203FCZZ	10- 8	AE	DS		C	
PDUC-0056FCZZ	9- 24	AK	EB	N	C	
PDUC-0057FCZZ	9- 27	AL	EB	N	C	
PDUC-0060FCZZ	18- 25	AG	DX	N	C	
PDUC-0061FCZZ	12- 37	AM	EG	N	C	
PDUC-0062FCZZ	12- 23	AF	DS	N	C	
PDUC-0063FCZZ	16- 1	AM	EG	N	C	
PFILD0185FCZ1	9- 22	AP	EQ	N	C	
PFILD0186FCZZ	12- 40	AF	DS	N	C	
PFTA-0089FCZZ	2- 4	AK	EB	N	C	
PFTA-0090FCZZ	38- 1	AU	FQ	N	D	
PFTA-0091FCZZ	3- 23	AC	DJ	N	C	
PGIDH1355FCZZ	18- 19	AK	EB	N	C	
PGIDH1356FCZZ	7- 8	AV	FQ	N	C	
PGIDH1357FCZZ	7- 17	AH	DX	N	C	
PGIDH1359FCZZ	43- 111	AQ	EZ	N	C	
PGIDH1361FCZZ	31- 24	AP	EQ	N	C	
PGIDH1362FCZZ	31- 46	AM	EG	N	C	
PGIDH1364FCZZ	17- 54	AH	DX	N	C	
PGIDH1366FCZZ	47- 17	AY	FX	N	C	
//	55- 17	AY	FX	N	C	
//	60- 17	AY	FX	N	C	
PGIDH1367FCZZ	47- 1	AM	EG	N	C	
//	55- 1	AM	EG	N	C	
//	60- 1	AM	EG	N	C	
PGIDH1368FCZZ	18- 9	AG	DX	N	C	
PGIDM1337FCZZ	1- 14	AK	EB	N	C	
PGIDM1339FCZZ	18- 49	AC	DD	N	C	
PGIDM1340FCZZ	7- 15	AM	EG	N	C	
//	47- 14	AM	EG	N	C	
//	55- 14	AM	EG	N	C	
//	60- 14	AM	EG	N	C	
PGIDM1342FCZZ	25- 1	AE	DS	N	C	
PGIDM1343FCZZ	12- 42	AC	DJ	N	C	
PGIDM1344FCZZ	26- 33	AM	EG	N	C	
//	40- 33	AM	EG	N	C	
//	66- 33	AM	EG	N	C	
PGIDM1345FCZZ	43- 41	AE	DS	N	C	
PGIDM1346FCZZ	43- 43	AE	DS	N	C	
PGIDM1347FCZZ	43- 6	AD	DJ	N	C	
PGIDM1348FCZZ	43- 78	AW	FQ	N	C	
PGIDM1349FCZZ	30- 5	AD	DJ	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
PGIDM1350FCZZ	30- 8	AD	DJ	N	C	
PGIDM1351FCZZ	30- 6	AD	DJ	N	C	
PGIDM1352FCZZ	30- 7	AD	DJ	N	C	
PGIDM1353FCZZ	4- 11	AY	FX	N	C	
PGIDM1354FCZZ	6- 29	AP	EQ	N	C	
PGIDM1365FCZZ	51- 12	BC	GT	N	C	
//	58- 12	BC	GT	N	C	
//	63- 12	BC	GT	N	C	
PGIDM1373FCZZ	31- 12	AF	DS	N	C	
PGLSP0074FCZZ	1- 15	BA	GJ	N	B	
PGUMS0147FCZZ	12- 14	AA	DD		C	
PGUMS0174FCZZ	12- 15	AB	DD		C	
PGUMS0182FCZZ	8- 17	AC	DJ		C	
PGUMS0226FCZZ	16- 29	AA	DD	N	C	
PGUMS0227FCZZ	65- 38	AB	DD	N	C	
PGUMS0228FCZZ	12- 13	AA	DD	N	C	
PHŌG-0346FCZZ	23- 18	AB	DD		C	
PHŌG-0385FCZZ	12- 78	AB	DD	N	C	
PHŌG-0387FCZZ	23- 23	AB	DD	N	C	
PHŌG-1023CCZZ	23- 13	AB	DD		C	
PLNS-0043FCZZ	12- 58	BG	HL		B	
PMAGT0015FCZZ	1- 11	AD	DJ		B	
PMAGT0072FCZZ	8- 22	AF	DS	N	C	
//	28- 22	AF	DS	N	C	
PMIR-0076FCZZ	10- 11	AP	EQ		B	
PMIR-0099FCZZ	12- 32	AS	FG	N	B	
PMIR-0100FCZZ	11- 6	AU	FQ	N	B	
PMIR-0101FCZZ	11- 7	AZ	GD	N	B	
PMIR-0102FCZZ	11- 24	AX	FX	N	B	
PMIR-0103FCZZ	11- 25	AR	EZ	N	B	
PMLT-0869FCZZ	16- 33	AB	DD	N	C	
PPIP-0162FCZZ	36- 14	AK	EB	N	C	
PPIP-0165FCZZ	36- 14	AL	EB	N	C	
PPIPP0109FCZZ	31- 45	AB	DD		C	
PPIPP0124FCZZ	31- 38	AB	DD		C	
PRDAF0046FCZZ	34- 2	AD	DJ		C	
PRDAR0048FCZZ	34- 3	AC	DJ		C	
PREFL0145FCZZ	10- 2	AT	FG	N	C	
PRNGP0013FCZZ	14- 17	AK	EB		C	
PRNGP0015FCZZ	14- 2	AK	EB		C	
PRNGP0019FCZZ	31- 42	AA	DD		C	
PRNGP0022FCZZ	14- 16	AA	DD		C	
PRNGP0025FCZZ	6- 27	AA	DD		C	
//	15- 18	AA	DD		C	
PRNGP0077FCZZ	4- 22	AA	DD	N	C	
PSEL-0487FCZZ	16- 37	AE	DS	N	C	
PSEL-0488FCZZ	16- 34	AE	DS	N	C	
PSEL-0493FCZZ	14- 32	AB	DD	N	C	
PSEL-0494FCZZ	15- 13	AB	DD	N	C	
PSEL-0495FCZZ	15- 7	AB	DD	N	C	
PSEL-0496FCZZ	15- 12	AD	DJ	N	C	
PSEL-0498FCZZ	15- 10	AC	DD	N	C	
PSEL-0500FCZZ	14- 35	AA	DD	N	C	
PSEL-0501FCZZ	14- 36	AA	DD	N	C	
PSEL-0502FCZZ	15- 41	AD	DJ	N	C	
PSEL-0503FCZZ	15- 42	AE	DJ	N	C	
PSEL-0504FCZZ	15- 40	AB	DD	N	C	
PSEL-0505FCZZ	15- 11	AB	DD	N	C	
PSEL-0506FCZZ	15- 8	AA	DD	N	C	
PSEL-0507FCZZ	15- 27	AD	DJ	N	C	
PSEL-0508FCZZ	15- 26	AB	DD	N	C	
PSHEG2817FCZ1	12- 63	AC	DJ		C	
PSHEP1804FCZZ	23- 19	AB	DD		C	
PSHEP2335FCZZ	12- 62	AA	DD		C	
PSHEP2340FCZZ	43- 23	AA	DD		C	
PSHEP2348FCZZ	43- 55	AB	DD		C	
PSHEP2511FCZZ	31- 8	AB	DD	N	C	
PSHEP2751FCZZ	12- 61	AC	DD		C	
PSHEP3029FCZZ	43- 19	AA	DD		C	
PSHEP3127FCZZ	18- 1	AE	DJ	N	C	
PSHEP3135FCZZ	43- 40	AC	DD	N	C	
PSHEP3136FCZZ	43- 42	AC	DD	N	C	
PSHEP3139FCZZ	65- 36	AE	DJ	N	C	
PSHEP3140FCZZ	65- 14	AE	DS	N	C	
PSHEP3174FCZZ	65- 17	AB	DD	N	C	
PSHEP3188FCZZ	14- 37	AC	DJ	N	C	
PSHEP3191FCZZ	15- 32	AC	DD	N	C	
PSHEP3201FCZZ	23- 16	AG	DX	N	C	
PSHEP3205FCZZ	14- 34	AB	DD	N	C	
PSHEP3206FCZZ	14- 33	AB	DD	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
PSHEP3223FCZZ	32- 1	AB	DD	N	C	
PSHEP3231FCZZ	65- 67	AB	DD	N	C	
PSHEP3239FCZZ	6- 32	AE	DS	N	C	
PSHEZ0287FCZZ	68- 3	AG	DS		D	
PSHEZ1760FCZZ	30- 13	AB	DD		C	
PSHEZ2714FCZZ	5- 1	AT	FG		C	
PSHEZ2715FCZZ	5- 1	AU	FQ		C	
PSHEZ2727FCZZ	34- 4	AC	DJ		C	
PSHEZ3126FCZZ	18- 52	AB	DD	N	C	
PSHEZ3130FCZZ	27- 9	AB	DD	N	C	
〃	29- 16	AB	DD	N	C	
〃	37- 9	AB	DD	N	C	
〃	39- 16	AB	DD	N	C	
〃	52- 16	AB	DD	N	C	
PSHEZ3132FCZZ	12- 57	AG	DX	N	C	
PSHEZ3133FCZZ	11- 36	AB	DD	N	C	
PSHEZ3134FCZZ	11- 37	AC	DD	N	C	
PSHEZ3138FCZZ	65- 15	AC	DD	N	C	
PSHEZ3142FCZZ	12- 87	AB	DD	N	C	
PSHEZ3143FCZZ	31- 50	AB	DD	N	C	
PSHEZ3153FCZZ	36- 12	AD	DJ	N	D	
PSHEZ3182FCZZ	12- 85	AA	DD	N	C	
PSHEZ3183FCZZ	12- 86	AA	DD	N	C	
PSHEZ3184FCZZ	11- 8	AD	DJ	N	C	
PSHEZ3192FCZZ	65- 32	AC	DD	N	C	
PSHEZ3200FCZZ	43- 67	AB	DD	N	C	
PSHEZ3214FCZZ	68- 4	AB	DD	N	C	
PSHEZ3226FCZZ	36- 13	AE	DS	N	C	
PSHT-0058FCZZ	16- 47	AD	DJ	N	C	
PSLDH0170FCZZ	3- 8	AD	DJ	N	C	
PSPAP0586FCZZ	33- 1	AB	DD	N	C	
PSPAP0587FCZZ	33- 2	AB	DD	N	C	
PSPAP0588FCZZ	33- 3	AB	DD	N	C	
PSPAZ0095FCZZ	43- 49	AB	DD		C	
〃	64- 22	AB	DD		C	
PSPAZ0593FCZZ	64- 5	AD	DJ	N	C	
PSTK-0015FCZZ	5- 6	AQ	EZ	N	D	
PTME-0168FCZZ	17- 29	AH	DX		C	
PTME-0174FCZ1	17- 48	AF	DS		C	
PTME-0178FCZZ	31- 6	AC	DD		C	
PTME-0221FCZZ	6- 12	AH	DX	N	C	
PTME-0222FCZZ	30- 10	AC	DJ	N	C	
PTME-0223FCZZ	28- 5	AD	DJ	N	C	
〃	29- 5	AD	DJ	N	C	
〃	39- 5	AD	DJ	N	C	
〃	43- 14	AD	DJ	N	C	
〃	52- 5	AD	DJ	N	C	
〃	65- 3	AD	DJ	N	C	
PWIR-0145FCZZ	12- 64	AM	EG	N	C	
PWIR-0146FCZZ	11- 46	AK	EB	N	C	
PWIR-0147FCZZ	12- 44	AP	EQ	N	C	
PWIR-0148FCZZ	65- 20	AS	FG	N	C	
PWIR-0149FCZZ	65- 30	AL	EG	N	C	
[Q]						
QACCD7412QCN3	23- 13	AS	FG		B	
QACCJ3410QCZZ	23- 13	AS	EZ	N	B	
QACCL8421QCZZ	23- 13	AW	FX		B	
QACCV6420QCZZ	23- 13	AV	FQ		B	
〃	23- 13	AV	FQ		B	
QCNCM0539FCZZ	67- 5	AE	DJ		C	
QCNCM0798FCZZ	32- 2	AE	DJ		C	
QCNCM0800FCZZ	32- 3	AE	DS	N	C	
QCNCM0806FCZZ	32- 4	AE	DS	N	C	
QCNCM0807FCZZ	32- 5	AE	DS	N	C	
QCNCM0808FCZZ	32- 6	AE	DS	N	C	
QCNCM0809FCZZ	32- 7	AE	DS	N	C	
QCNCM0811FCZZ	33- 4	AC	DD	N	C	
QCNCM0818FCZZ	33- 5	AF	DS	N	C	
QCNCM7014SC0H	32- 8	AB	DD		C	
QCNCM7014SC0I	32- 9	AB	DD		C	
QCNCW0381FCZZ	67- 1	AE	DS		C	
QCNCW0445FCZZ	34- 6	AA	DD		C	
QCNCW0449FCZZ	67- 2	AB	DD		C	
QCNCW0455FCZZ	34- 7	AC	DJ		C	
〃	67- 3	AC	DJ		C	
QCNCW0535FCZZ	67- 4	AB	DD		C	
QCNCW0690FCZZ	34- 8	AB	DD		C	
QCNCW0749FCZZ	32- 10	AB	DD	N	C	
QCNCW0805FCZZ	32- 11	AF	DS	N	C	
QCNCW0810FCZZ	33- 6	AF	DS	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
QCNCW0815FCZZ	34- 10	AE	DJ	N	C	
QCNTM1043CCZZ	30- 19	AB	DD		C	
QCNW-0001QCZZ	23- 13	AN	EQ		C	
〃	23- 13	AN	EQ		C	
QCNW-0069FCZZ	23- 13	AC	DD		C	
QCNW-0120FCZZ	23- 13	AU	FQ		B	
QCNW-0131FCZZ	23- 13	AU	FQ		B	
QEARB0054FCZZ	26- 30	AC	DD	N	C	
〃	40- 30	AC	DD	N	C	
〃	66- 30	AC	DD	N	C	
QEARB0055FCZZ	43- 93	AA	DD	N	C	
QEARB0056FCZZ	28- 20	AA	DD	N	C	
〃	29- 17	AA	DD	N	C	
〃	39- 17	AA	DD	N	C	
〃	52- 17	AA	DD	N	C	
QEARP0051FCZZ	16- 31	AE	DJ	N	C	
QEARP0053FCZZ	7- 19	AB	DD	N	C	
QFS-A2700QCZZ	34- 11	AD	DJ		A	
QFS-B0030FCZZ	34- 11	AH	DS		A	
QFS-C1500QCZZ	34- 11	AF	DS		A	
QFS-D2002WCZZ	9- 50	AB	DD		A	
QFSHB0023FCZZ	9- 51	AK	EB	N	C	
QFSHD0001QCZZ	34- 12	AA	DD		C	
QPLGA0001QCZZ	23- 13	AN	EQ		C	
QPLGA0002QCZZ	23- 13	AN	EQ		C	
QPLGA0003QCZZ	23- 13	AN	EQ		C	
QPLGA0005QCZZ	23- 13	AN	EQ		C	
QPLGA4171CCZZ	23- 13	AN	EG		C	
QSLP-0155FCZZ	18- 22	AB	DD	N	C	
QSLP-0156FCZZ	25- 5	AC	DJ	N	C	
QSLP-0157FCZZ	24- 7	AE	DS	N	C	
QSLP-0158FCZZ	24- 3	AF	DS	N	C	
QSLP-0159FCZZ	20- 13	AC	DD	N	C	
QSŌCZ0059FCZZ	20- 12	AL	EG	N	C	
QSŌCZ2051SC32	32- 12	AC	DJ		C	
QSŌCZ6428ACZZ	32- 13	AE	DS		C	
QSW-C1060QCZZ	9- 52	AT	FG	N	B	
QSW-C1390QCZZ	8- 3	AN	EQ	N	B	
QSW-L0443FCZZ	7- 10	AM	EG	N	B	
〃	47- 12	AM	EG	N	B	
〃	55- 12	AM	EG	N	B	
〃	60- 12	AM	EG	N	B	
QSW-M0319FCZZ	2- 20	AG	DS		B	
〃	7- 6	AG	DS		B	
〃	9- 40	AG	DS		B	
〃	47- 20	AG	DS		B	
〃	55- 20	AG	DS		B	
〃	60- 20	AG	DS		B	
QSW-M0339FCZZ	18- 41	AK	EB		B	
QSW-M0372FCZZ	2- 20	AH	DX		B	
〃	9- 40	AH	DX		B	
QSW-P0387FCZZ	67- 6	AB	DD		B	
QSW-P0444FCZZ	33- 7	AB	DD	N	B	
〃	33- 7	AB	DD	N	B	
〃	33- 31	AB	DD	N	B	
QSW-P0449FCZZ	33- 8	AD	DJ	N	B	
QSW-S5127NCZZ	67- 7	AH	DS		B	
QTANN0015FCZZ	23- 20	AG	DS		C	
QTANP0096FCZZ	23- 13	AA	DD		C	
QTANP0115FCZZ	34- 13	AB	DD		C	
QTANP0176FCZZ	23- 9	AB	DD	N	C	
QTANP0178FCZZ	23- 14	AB	DD	N	C	
[R]						
RC-KZ0287FCZZ	33- 9	AA	DD		C	
RC-QZ0117FCZZ	34- 14	AD	DJ		C	
RC-QZ0244FCZZ	67- 8	AE	DS		C	
RC-QZ0314FCZZ	34- 15	AH	DX		C	
RC-QZ0324FCZZ	34- 16	AE	DS		C	
RCILF0027FCZZ	34- 17	AQ	EZ		C	
RCILF0031FCZZ	34- 18	AR	EZ		C	
RCILF0043FCZZ	34- 20	AL	EG		C	
RCILF0045FCZZ	34- 48	AN	EQ		C	
RCILF0048FCZZ	34- 20	AG	DS		C	
RCRS-0007FCZZ	33- 10	AD	DJ		B	
RCRS-0008FCZZ	67- 9	AD	DJ		C	
RCRSQ5030SCZZ	32- 14	AG	DX		B	
RDTCM0098FCZZ	14- 6	AX	FX	N	B	
RDTCT0082FCZZ	17- 7	AQ	EZ		B	
RH-DZ0016FCZZ	32- 15	AB	DD		C	
RH-DZ0019FCZZ	34- 21	AG	DX		B	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
RHETP0056FCZZ	7- 21	AW	FX	N	B
RHETP0057FCZZ	47- 25	AX	FX	N	B
RLMPP0493FCZZ	16- 8	AV	FQ	N	B
RLMPU0334FCZZ	10- 3	AZ	GJ		B
RLMPU0335FCZZ	10- 3	AZ	GJ		B
RLMPU0485FCZZ	17- 58	AZ	GD	N	B
RLMPU0486FCZZ	17- 58	AZ	GD	N	B
RLMPU0487FCZZ	17- 58	AZ	GD	N	B
RLMPU0488FCZZ	17- 58	AZ	GD	N	B
RLMPU0489FCZZ	17- 58	AZ	GD	N	B
RLMPU0491FCZZ	17- 58	AZ	GD	N	B
RMOTD0698FCZZ	15- 36	AX	FX	N	B
RMOTE0630FCZZ	8- 1	AW	FX		B
//	12- 38	AW	FX		B
RMOTE0700FCZZ	9- 26	AX	FX	N	B
RMOTP0566FCZZ	43- 2	AV	FQ		B
RMOTP0692FCZZ	48- 9	BP	MB	N	B
//	56- 9	BP	MB	N	B
//	61- 9	BP	MB	N	B
RMOTP0694FCZZ	9- 36	BS	NE	N	B
RMOTP0695FCZZ	12- 5	BG	HL	N	B
RMOTP0696FCZZ	12- 31	AV	FQ	N	B
RMOTP0697FCZZ	11- 38	AV	FQ	N	B
RMOTV0693FCZZ	64- 1	BB	GN	N	B
RMPTA0021FCZZ	34- 22	AH	DX		B
RMPTA0030FCZZ	34- 22	AE	DJ		B
RMPTC0103QCJB	67- 10	AB	DD		B
RMPTC0562QCKB	67- 11	AD	DJ		B
RMPTC3102QCJB	32- 16	AA	DD	N	B
RMPTC4103QCJB	32- 17	AD	DJ		C
//	67- 13	AD	DJ		C
RMPTC4122QCJB	32- 18	AB	DD		B
RMPTC4222QCJB	32- 19	AA	DD		B
RMPTC4272QCJB	32- 20	AA	DD		C
RMPTC4472QCJB	67- 15	AB	DD		B
RMPTC4562QCJB	32- 21	AA	DD		B
RMPTC5103QCJB	67- 16	AD	DJ		B
RMPTC5272QCJB	32- 22	AB	DD		C
RMPTC5562QCJB	32- 23	AA	DD		B
RMPTC5681QCJB	33- 11	AB	DD	N	B
RMPTC6103QCJB	32- 24	AB	DD		C
RMPTC6272QCJB	32- 25	AC	DD		C
RMPTC6562QCJB	32- 26	AB	DD		B
RMPTC8103QCJB	32- 27	AC	DD		B
RMPTC8681QCJB	33- 12	AC	DD		B
RMPTW4101QCJE	67- 12	AC	DD		B
RMPTW4103QCJE	67- 14	AC	DD		B
RMPTW5562QCJB	67- 17	AC	DD	N	B
RMPTW5562QCJE	67- 18	AB	DD		B
RMPTW7681QCJE	33- 13	AC	DD		B
RPLU-0241FCZZ	9- 41	AM	EG		C
RPLU-0278FCZZ	26- 19	AQ	EQ	N	B
//	40- 19	AQ	EQ	N	B
//	66- 19	AQ	EQ	N	B
RPLU-0279FCZZ	31- 4	AN	EG	N	B
RPLU-0280FCZZ	16- 30	AN	EQ	N	B
RR-WZ0328FCZZ	34- 25	AD	DJ		C
RR-XZ0337FCZZ	34- 26	AC	DJ		B
RR-XZ0338FCZZ	34- 26	AC	DJ		B
RRLYD4420QCZZ	34- 27	AQ	EZ	N	B
RRLYD4421QCZZ	34- 27	AQ	EZ	N	B
RRLYD6120QCZZ	34- 28	AP	EQ		B
RRLYD6121QCZZ	34- 28	AM	EG		B
RTHM-0009FCZZ	17- 8	AK	EB		B
RTRNZ0468FCZZ	9- 21	BU	RB	N	B
[S]					
SPAKA1672FCZZ	68- 5	AA	DD		D
SPAKA4693FCZZ	36- 15	AE	DS	N	D
SPAKA4695FCZZ	42- 2	AN	EQ	N	D
//	45- 2	AN	EQ	N	D
SPAKA4706FCZZ	36- 16	AT	FG	N	C
SPAKA4707FCZZ	36- 17	AT	FG	N	C
SPAKA4708FCZZ	36- 16	AT	FG	N	D
SPAKA4709FCZZ	36- 17	AT	FG	N	D
SPAKA4710FCZZ	68- 6	AD	DJ	N	D
SPAKA4711FCZZ	36- 18	AG	DS	N	D
SPAKA4715FCZZ	42- 3	AP	EQ	N	D
//	45- 3	AP	EQ	N	D
SPAKA4716FCZZ	45- 4	AA	DD	N	D
SPAKA4717FCZZ	45- 5	AD	DJ	N	D

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
SPAKA4719FCZZ	42- 4	AE	DJ	N	D
SPAKA4720FCZZ	42- 5	AD	DJ	N	D
SPAKA4721FCZZ	42- 6	AD	DJ	N	D
SPAKA4722FCZZ	42- 7	AE	DJ	N	D
SPAKA4725FCZZ	38- 2	AD	DJ	N	D
SPAKA4794FCZZ	38- 3	AD	DJ	N	D
SPAKA4795FCZZ	38- 9	AD	DJ	N	D
//	45- 6	AD	DJ	N	D
SPAKA4796FCZZ	45- 7	AD	DJ	N	D
SPAKA4797FCZZ	68- 7	AC	DD	N	D
SPAKA4820FCZZ	38- 10	AD	DJ	N	D
SPAKA4821FCZZ	38- 11	AD	DJ	N	D
SPAKA4822FCZZ	38- 12	AD	DJ	N	D
SPAKA4826FCZZ	68- 8	AC	DD	N	D
SPAKA4827FCZZ	68- 9	AD	DJ	N	D
SPAKA4828FCZZ	68- 10	AD	DJ	N	D
SPAKC4684FCZZ	36- 19	BA	GJ	N	D
SPAKC4688FCZZ	36- 19	AZ	GD	N	D
SPAKC4689FCZZ	36- 19	BA	GJ	N	D
SPAKC4690FCZZ	36- 19	BA	GJ	N	D
SPAKC4697FCZZ	68- 11	AY	GD	N	D
SPAKC4698FCZZ	68- 11	AY	GD	N	D
SPAKC4699FCZZ	68- 11	AY	GD	N	D
SPAKC4700FCZZ	68- 11	AY	GD	N	D
SPAKC4714FCZZ	45- 8	AX	FX	N	D
SPAKC4714FC11	45- 8	AX	FX	N	D
SPAKC4718FCZZ	42- 8	AW	FQ	N	D
SPAKC4718FC11	42- 8	AW	FQ	N	D
SPAKC4723FCZZ	38- 4	AR	EZ	N	D
SPAKC4723FC11	38- 4	AR	EZ	N	D
SPAKC4728FCZZ	36- 19	BA	GJ	N	D
SPAKC4729FCZZ	36- 19	AZ	GD	N	D
SPAKC4730FCZZ	36- 19	BA	GJ	N	D
SPAKC4731FCZZ	36- 19	BA	GJ	N	D
SPAKC4735FCZZ	36- 19	BA	GJ	N	D
SPAKC4736FCZZ	36- 19	BA	GJ	N	D
SPAKC4737FCZZ	68- 11	AY	GD	N	D
SPAKC4768FCZZ	36- 19	BA	GJ	N	D
SPAKC4768FC11	36- 19	BA	GJ	N	D
SPAKC4769FCZZ	36- 19	BA	GJ	N	D
SPAKC4769FC11	36- 19	BA	GJ	N	D
SSAKA0005WCZZ	42- 8	AA	DD		D
SSAKA0006UCZZ	42- 9	AA	DD		D
//	45- 9	AA	DD		D
//	68- 12	AA	DD		D
SSAKA2340QCZZ	45- 10	AA	DD		D
SSAKA2440QCZZ	36- 20	AB	DD		D
//	38- 5	AB	DD		D
SSAKA2540QCZZ	42- 10	AB	DD		D
SSAKA3440QCZZ	68- 13	AB	DD		D
SSAKA3441QCZZ	36- 20	AB	DD	N	D
SSAKH0021SCZZ	38- 6	AC	DD		D
SSAKH3002KCZZ	42- 11	AD	DJ		D
//	45- 11	AD	DJ		D
[T]					
TCADS0497FCZZ	36- 23	AH	DX		D
TCADS0649FCZZ	36- 23	AM	EG		D
TCADS0764FCZZ	36- 23	AE	DJ		D
TCADZ0772FCZZ	36- 24	AE	DJ		D
TCADZ0923FCZZ	36- 21	AA	DD		D
TCADZ0924FCZZ	36- 22	AA	DD		D
TCADZ0965FCZZ	36- 25	AG	DS	N	D
TCADZ0983FCZZ	42- 12	AG	DS	N	D
TCADZ0984FCZZ	42- 12	AG	DS	N	D
TCADZ0985FCZZ	42- 12	AT	FG	N	D
TCADZ0986FCZZ	38- 7	AT	FG	N	D
TCADZ0987FCZZ	38- 7	AT	FG	N	D
TCADZ0988FCZZ	38- 7	AT	FG	N	D
TCADZ0991FCZZ	68- 14	AB	DD	N	D
TCADZ0992FCZZ	68- 15	AE	DS	N	D
TCADZ0993FCZZ	68- 14	AB	DD	N	D
TCADZ0994FCZZ	68- 14	AB	DD	N	D
TCADZ0995FCZZ	68- 15	AF	DS	N	D
TCADZ0996FCZZ	68- 15	AH	DX	N	D
TCADZ1018FCZZ	45- 12	AG	DS	N	D
TCADZ1019FCZZ	45- 12	AG	DS	N	D
TCADZ1020FCZZ	45- 12	AN	EG	N	D
TCADZ2001QCZZ	36- 25	AE	DJ		D
TCAUA0766FCZZ	1- 20	AB	DD		C
TCAUA0770FCZZ	1- 20	AB	DD		C

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
TCAUH0687FCZZ	1- 20	AA	DD		C
TCAUH0819FCZZ	1- 25	AA	DD		C
〃	18- 66	AA	DD		C
TCAUH0821FCZZ	1- 25	AA	DD		C
〃	18- 66	AA	DD		C
TCAUH0878FCZZ	17- 4	AC	DD		C
TCAUH0879FCZZ	17- 4	AC	DD		C
TCAUH0918FCZZ	1- 20	AA	DD		C
TCAUH0931FCZZ	17- 4	AB	DD		C
TCAUH0932FCZZ	17- 5	AB	DD		C
TCAUH0959FCZZ	17- 5	AA	DD	N	C
TCAUH0960FCZZ	6- 31	AB	DD	N	C
TCAUH0961FCZZ	6- 31	AB	DD	N	C
TCAUH0962FCZZ	6- 31	AB	DD	N	C
TCAUH0963FCZZ	1- 25	AB	DD	N	C
〃	18- 66	AB	DD	N	C
TINSE0999FCZZ	36- 30	AQ	EZ	N	D
TINSE1000FCZZ	36- 30	AU	FQ	N	D
TINSE1006FCZZ	36- 30	BB	GJ	N	D
TINSE1007FCZZ	36- 30	BB	GJ	N	D
TINSE1020FCZZ	36- 30	AQ	EZ	N	D
TINSE1021FCZZ	36- 30	AU	FQ	N	D
TINSE1027FCZZ	36- 30	BB	GJ	N	D
TINSE1028FCZZ	36- 30	AU	FQ	N	D
TINSF1002FCZZ	36- 30	AW	FX	N	D
TINSF1023FCZZ	36- 30	AW	FQ	N	D
TINSG1001FCZZ	36- 30	AV	FQ	N	D
TINSG1022FCZZ	36- 30	AX	FX	N	D
TINSH1041FCZZ	36- 30	AW	FQ	N	D
TINSH1042FCZZ	36- 30	AW	FQ	N	D
TINSI1004FCZZ	36- 30	AX	FX	N	D
TINSI1025FCZZ	36- 30	AX	FX	N	D
TINSJ0998FCZZ	36- 30	AU	FQ	N	D
TINSS1003FCZZ	36- 30	AZ	GJ	N	D
TINSS1024FCZZ	36- 30	AZ	GJ	N	D
TINSZ1005FCZZ	36- 30	AZ	GJ	N	D
TINSZ1026FCZZ	36- 30	AZ	GJ	N	D
TLABH2013FCZZ	68- 16	AA	DD		C
TLABH2646FCZZ	36- 26	AB	DD		C
〃	42- 13	AB	DD		C
〃	68- 19	AB	DD		C
TLABH2967FCZ1	36- 27	AC	DD		C
TLABH3062FCZZ	68- 17	AB	DD		C
TLABH3076FCZZ	5- 7	AD	DJ	N	C
TLABH3077FCZZ	5- 7	AD	DJ	N	C
TLABH3078FCZZ	5- 7	AD	DJ	N	C
TLABH3079FCZZ	5- 7	AD	DJ	N	C
TLABH3080FCZZ	5- 7	AD	DJ	N	C
TLABH3081FCZZ	5- 7	AD	DJ	N	C
TLABH3082FCZZ	5- 7	AD	DJ	N	C
TLABH3083FCZZ	1- 2	AG	DX	N	D
TLABH3084FCZZ	1- 2	AH	DX	N	D
TLABH3085FCZZ	1- 2	AH	DX	N	D
TLABH3203FCZZ	5- 7	AD	DJ	N	C
TLABH3229FCZZ	36- 29	AE	DS	N	C
TLABH3230FCZZ	36- 29	AE	DS	N	C
TLABZ0218FCZZ	42- 14	AB	DD		C
〃	45- 13	AB	DD		C
〃	68- 18	AB	DD		C
TLABZ0241FCZZ	36- 28	AB	DD		C
TLABZ0248FCZZ	36- 28	AB	DD		C
TLABZ1610FCŌZ	38- 8	AB	DD	N	C
TLABZ1611FCŌZ	38- 8	AB	DD	N	C
TLABZ1612FCŌZ	38- 8	AA	DD		C
TLABZ1613FCŌZ	38- 8	AA	DD		C
TLABZ1614FCŌZ	38- 8	AB	DD	N	C
TLABZ1615FCŌZ	38- 8	AB	DD	N	C
TLABZ1616FCŌZ	38- 8	AB	DD	N	C
TLABZ1617FCŌZ	38- 8	AA	DD		C
TLABZ1618FCŌZ	38- 8	AA	DD		C
TLABZ1619FCŌZ	38- 8	AB	DD	N	C
TLABZ1679FCŌZ	38- 8	AB	DD	N	C
TLABZ1680FCŌZ	38- 8	AB	DD	N	C
TLABZ2253FCGZ	65- 12	AB	DD		C
TLABZ2811FCZZ	1- 18	AB	DD		C
TLABZ3020FCZZ	29- 12	AC	DD		C
〃	39- 12	AC	DD		C
〃	52- 12	AC	DD		C
TLABZ3086FCZZ	30- 22	AC	DD	N	C
TLABZ3087FCZZ	30- 22	AC	DD	N	C

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
TLABZ3088FCZZ	30- 22	AC	DD	N	C
TLABZ3090FCZZ	27- 5	AB	DD	N	C
〃	37- 5	AB	DD	N	C
TLABZ3091FCZZ	1- 21	AC	DJ	N	C
TLABZ3105FCZZ	28- 4	AD	DJ	N	C
〃	29- 4	AD	DJ	N	C
〃	39- 4	AD	DJ	N	C
〃	52- 4	AD	DJ	N	C
TLABZ3132FCZZ	65- 71	AC	DD	N	C
TLABZ3133FCZZ	65- 71	AC	DD	N	C
TLABZ3134FCZZ	65- 70	AC	DD	N	C
TLABZ3135FCZZ	65- 70	AC	DD	N	C
TLABZ3136FCZZ	65- 68	AC	DJ	N	C
TLABZ3137FCZZ	65- 72	AC	DD	N	C
TLABZ3138FCZZ	65- 69	AC	DD	N	C
TLABZ3139FCZZ	65- 68	AC	DJ	N	C
TLABZ3140FCZZ	65- 28	AD	DJ	N	C
TLABZ3141FCZZ	65- 6	AD	DJ	N	C
TLABZ3143FCZZ	15- 43	AB	DD	N	C
TLABZ3149FCZZ	30- 23	AC	DD	N	C
TLABZ3150FCZZ	30- 23	AC	DD	N	C
TLABZ3151FCZZ	30- 23	AC	DD	N	C
TLABZ3168FCZZ	15- 51	AB	DD	N	C
TLABZ3168FCZ1	15- 51	AB	DD	N	C
TLABZ3168FCZ2	15- 51	AB	DD	N	C
TLABZ3187FCZZ	65- 68	AC	DJ	N	C
TLABZ3188FCZZ	65- 28	AD	DJ	N	C
TLABZ3189FCZZ	65- 28	AD	DJ	N	C
TLABZ3190FCZZ	65- 6	AD	DJ	N	C
TLABZ3191FCZZ	65- 6	AD	DJ	N	C
TLABZ3217FCZZ	45- 14	AD	DJ	N	C
TLABZ3218FCZZ	43- 68	AC	DD	N	C
【U】					
UCLEZ0117FCZZ	16- 24	AT	FG	N	C
UCLEZ0118FCZZ	16- 39	AS	FG	N	C
UCLEZ0123FCZZ	15- 9	AF	DS	N	C
【V】					
VCCCPU1HH101J	33- 14	AB	DD		C
VCCCPU1HH220J	32- 28	AA	DD		C
VCEAGA1VW107M	34- 29	AB	DD		C
VCEAGU1CW107M	32- 29	AB	DD		C
VCEAGU1CW476M	67- 19	AB	DD		C
VCEAGU1CW477M	32- 30	AC	DD		C
VCEAGU1HW105M	32- 31	AA	DD		C
VCEAGU1HW224M	32- 32	AA	DD		C
VCEAGU1VW106M	32- 33	AA	DD		C
VCEAGU1VW107M	32- 34	AB	DD		C
VCEAGU1VW335M	32- 35	AA	DD		C
VCEAGU1VW476M	32- 36	AB	DD		C
〃	67- 20	AB	DD		C
VCEAGU1VW477M	32- 37	AD	DJ		C
VCEAJU1CW476M	33- 15	AB	DD		C
VCKYPU1HB102K	33- 16	AA	DD		C
〃	67- 21	AA	DD		C
VCKYPU1HB103K	67- 22	AA	DD		C
VCKYPU1HB223Z	67- 23	AA	DD		C
VCKYTQ1HB102K	32- 38	AA	DD		C
VCQYNU1HM102K	32- 40	AA	DD		C
VCQYNU1HM103K	32- 41	AA	DD		C
VCQYNU1HM104K	32- 42	AB	DD		C
〃	34- 30	AB	DD		C
VCQYNU1HM223K	34- 31	AA	DD		C
VCQYNU1HM473K	34- 31	AB	DD		C
VHDDAN202K/−1	32- 43	AB	DD		B
VHDDAP202K/−1	32- 44	AB	DD		B
VHDDSS133HV−1	33- 17	AA	DD		B
〃	67- 24	AA	DD		B
VHDRM10Z///−1	34- 32	AC	DJ		B
VHDS1WBA60S−1	34- 33	AD	DJ		B
VHDS3V10///−1	32- 45	AC	DJ		B
VHDWŌ6B////−1	32- 46	AE	DJ		B
〃	34- 34	AE	DJ		B
VHD1SR124−200	32- 47	AB	DD		B
VHD1S2584//−1	67- 25	AH	DS		B
VHEHZ6A1///−1	32- 48	AB	DD		B
VHERD22FB//−1	32- 49	AD	DJ		B
VHIHD8−570Z01	32- 50	BG	HG	N	B
VHIIR2C23//−1	32- 51	AF	DS		B
〃	67- 26	AF	DS		B
VHILC7935//−1	33- 18	AN	EQ		B

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
VHILM393P//-1	67- 27	AM	EG		B
VHILR3717M/-1	33- 19	AH	DX		B
VHINJM2901M-1	32- 52	AE	DS		B
VHINJM2903M/-	32- 53	AD	DJ		B
VHISHN002//-1	34- 35	AU	FQ	N	B
VHISLA6023/-1	32- 54	AR	EZ	N	B
VHISN74LS04NS	32- 55	AF	DS		B
VHISN74LS06-1	67- 28	AE	EB		B
VHISN74LS08NS	32- 56	AF	DS		B
VHISN74LS14-1	33- 20	AM	EQ		B
VHISN74LS14NS	32- 57	AL	EG		B
VHISN74LS32NS	32- 58	AF	DS		B
VHISTA301A/-1	32- 59	AK	EB		B
VHITA7291S/-1	32- 60	AF	DS		B
VHITC74HC14PN	67- 29	AG	DX		B
VHITD62503F-1	32- 61	AF	DS	N	B
VHITD62503P-1	67- 30	AG	DX		B
VHITD62583F-1	32- 62	AH	DX	N	B
VHITE7750//-1	32- 63	AW	FX		C
VHITM1641P-L/	34- 36	AM	EG		B
VHIULN2003AN1	32- 64	AE	DJ	N	B
VHIUPA2004C-1	67- 31	AN	EG		B
VHIUPC1246C-1	32- 65	AK	EB	N	B
VHIUPC358G2E1	32- 66	AD	DJ	N	B
VHI27C01001FC	32- 67	AZ	GD	N	B
VHI28C64-15-1	32- 68	AZ	GD	N	B
VHI74LS139ANS	32- 69	AE	DS	N	B
VHI91P64001FC	67- 32	BF	HC	N	B
VHPGL3KG8//-1	33- 21	AB	DD	N	B
VHPGL3PR8//-1	33- 22	AA	DD		B
VHPGL9E030/-1	33- 23	AH	DX	N	B
VHPGP1A22LC-1	8- 7	AK	EB		B
〃	9- 31	AK	EB		B
〃	12- 36	AK	EB		B
VHPGP1A71A1-1	11- 48	AG	DX		B
〃	12- 77	AG	DX		B
〃	26- 14	AG	DX		B
〃	31- 16	AG	DX		B
〃	40- 14	AG	DX		B
〃	43- 7	AG	DX		B
〃	66- 14	AG	DX		B
VHPGP1S44S/-1	43- 61	AK	EB	N	B
VHPGP3A38//-1	9- 32	AH	DX		B
VHPGP3A39//-1	12- 1	AH	DX		B
VHPLB-602MA1/	33- 24	AL	EG		B
VHPLD603MG/-1	33- 25	AE	DS		B
VHPSLR-320MCA	33- 26	AB	DD	N	B
〃	33- 26	AB	DD	N	B
〃	33- 32	AB	DD	N	B
VHPSLR-320VCA	33- 27	AB	DD	N	B
VHRS21MD3V/-1	34- 37	AE	DS		B
VHRS21MD3VY-1	34- 37	AG	DS	N	B
VHRS21ME4//-1	34- 38	AH	DX		B
VHRS21ME4Y/-1	34- 38	AH	DX	N	B
VHSAC08FSM/-1	34- 39	AK	EB		B
VHSAC12DSM/-1	34- 39	AK	EB		B
VHSBCR16PM-12	34- 40	AK	EB		B
VRD-RB2EY105J	34- 41	AA	DD		C
VRD-RB2EY474J	34- 41	AA	DD		C
VRD-RC2EY102J	67- 33	AA	DD		C
VRD-RC2EY103J	67- 34	AA	DD		C
VRD-RC2EY123J	67- 35	AA	DD		C
VRD-RC2EY183J	67- 36	AA	DD		C
VRD-RC2EY222J	67- 37	AA	DD		C
VRD-RC2EY223J	67- 38	AA	DD		C
VRD-RC2EY241J	33- 28	AA	DD		C
VRD-RC2EY392J	67- 39	AA	DD		C
VRD-RC2EY393J	67- 40	AA	DD		C
VRD-RC2EY472J	67- 41	AA	DD		C
VRD-RC2EY513J	67- 43	AA	DD		C
VRD-RC2EY681J	33- 29	AA	DD		C
VRD-RC2EY683J	67- 42	AA	DD		C
VRNRB2EK2003F	34- 42	AA	DD		C
VRNRB2EK4123F	34- 42	AA	DD		C
VRS-HT2HA101J	34- 44	AA	DD		C
VRS-HT2HA121J	34- 45	AA	DD		C
VRS-HT2HA201J	34- 45	AA	DD		C
VRS-RE3DAR33J	67- 44	AB	DD	N	C
VRS-RE3DA200J	67- 45	AB	DD	N	C
VRS-RE3LA103J	34- 46	AB	DD		C

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R
VRS-ST3ABR22J	32- 70	AA	DD	N	C
VRS-ST3AB180J	32- 71	AA	DD	N	C
VRS-TS2AD101J	32- 72	AA	DD		C
VRS-TS2AD102F	32- 73	AA	DD		C
VRS-TS2AD102J	32- 74	AA	DD		C
VRS-TS2AD103F	32- 75	AA	DD		C
VRS-TS2AD103J	32- 76	AA	DD		C
VRS-TS2AD104J	32- 77	AA	DD		C
VRS-TS2AD122J	32- 78	AA	DD		C
VRS-TS2AD133F	32- 79	AA	DD		C
VRS-TS2AD151J	32- 80	AA	DD		C
VRS-TS2AD152F	32- 81	AA	DD	N	C
VRS-TS2AD153F	32- 82	AA	DD		C
VRS-TS2AD201J	32- 83	AG	DS		C
VRS-TS2AD203J	32- 84	AA	DD		C
VRS-TS2AD204J	32- 85	AA	DD		C
VRS-TS2AD222J	32- 86	AA	DD		C
VRS-TS2AD223J	32- 87	AA	DD		C
VRS-TS2AD224J	32- 88	AA	DD		C
VRS-TS2AD242J	32- 89	AA	DD		C
VRS-TS2AD272J	32- 90	AA	DD		C
VRS-TS2AD301J	32- 91	AA	DD		C
VRS-TS2AD332F	32- 92	AA	DD	N	C
VRS-TS2AD363J	32- 93	AA	DD		C
VRS-TS2AD393J	32- 94	AA	DD		C
VRS-TS2AD431J	32- 95	AA	DD		C
VRS-TS2AD432F	32- 96	AA	DD	N	C
VRS-TS2AD471J	32- 97	AA	DD		C
VRS-TS2AD473J	32- 98	AA	DD		C
VRS-TS2AD562J	32- 99	AA	DD		C
VRS-TS2AD563J	32- 100	AA	DD		C
VRS-TS2AD622F	32- 101	AA	DD		C
VRS-TS2AD624J	32- 102	AA	DD	N	C
VRS-TS2AD681J	32- 103	AA	DD		C
VRS-TS2AD682F	32- 104	AA	DD		C
VRS-TS2AD752J	32- 105	AA	DD		C
VRS-TS2AD911J	32- 106	AA	DD		C
VRS-TS2AD912F	32- 107	AA	DD	N	C
VRS-TS2AD913J	32- 108	AA	DD		C
VSDTC114YK/-1	32- 109	AC	DD		B
VSDTC114YS/-1	33- 30	AB	DD		C
VS2SB1020-/-1	67- 46	AH	DX		B
VS2SB1185-EFC	67- 47	AG	DS		B
VS2SC945///-1	32- 110	AD	DJ		B
〔X〕					
XBBSC40P08000	46- 30	AA	DD		C
〃	54- 30	AA	DD		C
〃	59- 30	AA	DD		C
XBBSC40P10000	68- 21	AA	DD		C
XBBSD30P04000	64- 4	AA	DD		C
〃	65- 64	AA	DD		C
XBBSD30P06000	51- 1	AA	DD		C
〃	58- 1	AA	DD		C
〃	63- 1	AA	DD		C
〃	64- 2	AA	DD		C
〃	65- 48	AA	DD		C
XBBSD30P08000	29- 28	AA	DD		C
〃	39- 28	AA	DD		C
〃	52- 28	AA	DD		C
XBBSD40P06000	15- 6	AA	DD		C
XBBSD40P08000	15- 52	AA	DD		C
XBBSD40P10000	7- 2	AA	DD		C
〃	9- 18	AA	DD		C
〃	12- 80	AA	DD		C
〃	48- 18	AA	DD		C
〃	56- 18	AA	DD		C
XBBSD40P12000	24- 16	AA	DD		C
XBBSD40P18000	14- 9	AA	DD	N	C
XBBSD40P30000	9- 19	AA	DD		C
〃	48- 19	AA	DD		C
〃	56- 19	AA	DD		C
XBBS240P14000	16- 62	AA	DD	N	C
XBPBZ40P06K00	9- 47	AA	DD		C
〃	23- 8	AA	DD		C
XBPSD30P04K00	12- 30	AA	DD		C
XBPSD30P04000	6- 25	AA	DD		C
〃	17- 6	AA	DD		C
〃	24- 15	AA	DD		C
XBPSD30P06KS0	9- 38	AA	DD		C
〃	12- 81	AA	DD		C

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
XBPSD30P06KS0	43- 16	A A	D D		C	
XBPSD30P06000	4- 6	A A	D D		C	
//	17- 12	A A	D D		C	
//	17- 38	A A	D D		C	
//	20- 9	A A	D D		C	
//	25- 4	A A	D D		C	
//	43- 44	A A	D D		C	
XBPSD30P08KS0	14- 22	A A	D D		C	
//	64- 14	A A	D D		C	
XBPSD30P08000	28- 17	A A	D D		C	
XBPSD30P10K00	34- 47	A A	D D		C	
XBPSD30P10000	24- 5	A A	D D		C	
XBPSD30P12000	47- 19	A A	D D		C	
//	55- 19	A A	D D		C	
//	60- 19	A A	D D		C	
XBPSD30P14000	7- 7	A A	D D		C	
//	23- 21	A A	D D		C	
XBPSD30P20000	24- 14	A A	D D		C	
XBPSD40P06KS0	12- 76	A A	D D		C	
//	17- 14	A A	D D		C	
XBPSD40P06K00	9- 5	A A	D D		C	
//	12- 41	A A	D D		C	
XBPSD40P06000	6- 6	A A	D D		C	
//	8- 21	A A	D D		C	
//	11- 33	A A	D D		C	
//	12- 75	A A	D D		C	
//	17- 2	A A	D D		C	
//	28- 8	A A	D D		C	
//	29- 8	A A	D D		C	
//	38- 13	A A	D D		C	
//	39- 8	A A	D D		C	
//	47- 2	A A	D D		C	
//	52- 8	A A	D D		C	
//	55- 2	A A	D D		C	
//	60- 2	A A	D D		C	
XBPSD40P08KS0	8- 29	A A	D D		C	
//	14- 10	A A	D D		C	
//	18- 84	A A	D D		C	
//	19- 18	A A	D D		C	
//	20- 38	A A	D D		C	
//	23- 10	A A	D D		C	
//	45- 15	A A	D D		C	
XBPSD40P08000	2- 5	A A	D D		C	
//	27- 1	A A	D D		C	
//	29- 10	A A	D D		C	
//	37- 1	A A	D D		C	
//	39- 10	A A	D D		C	
//	52- 10	A A	D D		C	
XBPSD40P10KS0	18- 63	A A	D D		C	
//	65- 4	A A	D D		C	
XBPSD40P10000	9- 34	A A	D D		C	
XBPSD40P12KS0	12- 52	A A	D D		C	
XBPSD40P12K00	12- 79	A A	D D		C	
XBPSD40P12000	8- 8	A A	D D		C	
XBPSD40P18000	7- 11	A A	D D		C	
//	47- 11	A A	D D		C	
//	55- 11	A A	D D		C	
//	60- 11	A A	D D		C	
XBPSD40P20XS0	23- 11	A A	D D		C	
XBPSD40P25XS0	23- 11	A A	D D		C	
XBPSD40P25000	12- 51	A A	D D		C	
XBPSD40P30000	8- 5	A A	D D		C	
XBPSF30P06000	16- 41	A A	D D		C	
XBPS240P06000	16- 15	A A	D D		C	
//	16- 25	A A	D D		C	
XBSSE30P10000	1- 23	A A	D D		C	
XBTSC40P08000	1- 12	A A	D D		C	
//	28- 3	A A	D D		C	
//	29- 3	A A	D D		C	
//	39- 3	A A	D D		C	
//	43- 12	A A	D D		C	
//	52- 3	A A	D D		C	
XBTSC40P10000	1- 4	A A	D D		C	
XBTSF40P04000	12- 29	A A	D D		C	
XEBSD30P06000	10- 21	A A	D D		C	
//	25- 7	A A	D D		C	
//	30- 16	A A	D D		C	
//	31- 23	A A	D D		C	
XEBSD30P08000	26- 31	A A	D D		C	
//	30- 18	A A	D D		C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
XEBSD30P08000	40- 31	A A	D D		C	
//	65- 27	A A	D D		C	
//	66- 31	A A	D D		C	
XEBSD30P10000	16- 2	A A	D D		C	
//	16- 23	A A	D D		C	
XEBSD30P12000	26- 24	A A	D D		C	
//	40- 24	A A	D D		C	
//	66- 24	A A	D D		C	
XEBSD40P08000	10- 20	A A	D D		C	
//	15- 28	A A	D D		C	
//	18- 8	A A	D D		C	
//	44- 20	A A	D D		C	
XEBSD40P10000	26- 34	A A	D D		C	
//	28- 11	A A	D D		C	
//	29- 20	A A	D D		C	
//	39- 20	A A	D D		C	
//	40- 34	A A	D D		C	
//	52- 20	A A	D D		C	
//	65- 5	A A	D D		C	
//	66- 34	A A	D D		C	
XEBSD40P12000	36- 31	A A	D D		C	
//	42- 15	A A	D D		C	
//	65- 37	A A	D D		C	
//	68- 20	A A	D D		C	
XEBSF30P08000	15- 38	A A	D D		C	
XEBSF30P10000	14- 28	A A	D D		C	
XEPSD20P05000	2- 16	A A	D D		C	
XEPSD30P05000	3- 11	A A	D D		C	
//	11- 34	A A	D D		C	
XEPSD30P06000	3- 13	A A	D D		C	
//	6- 9	A A	D D		C	
//	16- 40	A A	D D		C	
//	24- 2	A A	D D		C	
XEPSD30P08X00	9- 44	A A	D D		C	
//	26- 21	A A	D D		C	
//	40- 21	A A	D D		C	
//	65- 35	A A	D D		C	
//	66- 21	A A	D D		C	
XEPSD30P08000	6- 33	A A	D D		C	
//	43- 1	A A	D D		C	
XEPSD40P06000	12- 27	A A	D D		C	
//	18- 20	A A	D D		C	
//	43- 82	A A	D D		C	
XEPSD40P08000	6- 23	A A	D D		C	
//	7- 16	A A	D D		C	
//	18- 83	A A	D D		C	
//	43- 3	A A	D D		C	
XEPSD40P10000	9- 25	A A	D D		C	
//	18- 18	A A	D D		C	
//	20- 6	A A	D D		C	
//	21- 18	A A	D D		C	
//	28- 6	A A	D D		C	
//	29- 6	A A	D D		C	
//	39- 6	A A	D D		C	
//	43- 13	A A	D D		C	
//	52- 6	A A	D D		C	
XEPSD40P30000	12- 39	A A	D D		C	
XEPSD40P35000	9- 23	A A	D D		C	
XEPSF30P05000	12- 70	A B	D D	N	C	
XHBSD30P06000	16- 26	A A	D D		C	
//	31- 10	A A	D D		C	
XHBSD30P08000	10- 19	A A	D D		C	
//	31- 18	A A	D D		C	
XHBSD40P10000	4- 13	A A	D D		C	
//	8- 20	A A	D D		C	
//	9- 7	A A	D D		C	
//	20- 42	A A	D D		C	
//	23- 3	A A	D D		C	
//	31- 11	A A	D D		C	
XHBSD40P12000	31- 19	A A	D D	N	C	
XHBSE40P10000	1- 19	A A	D D		C	
//	8- 25	A A	D D		C	
//	46- 2	A A	D D		C	
//	47- 18	A A	D D		C	
//	48- 4	A A	D D		C	
//	50- 11	A A	D D		C	
//	54- 2	A A	D D		C	
//	55- 18	A A	D D		C	
//	56- 4	A A	D D		C	
//	59- 2	A A	D D		C	

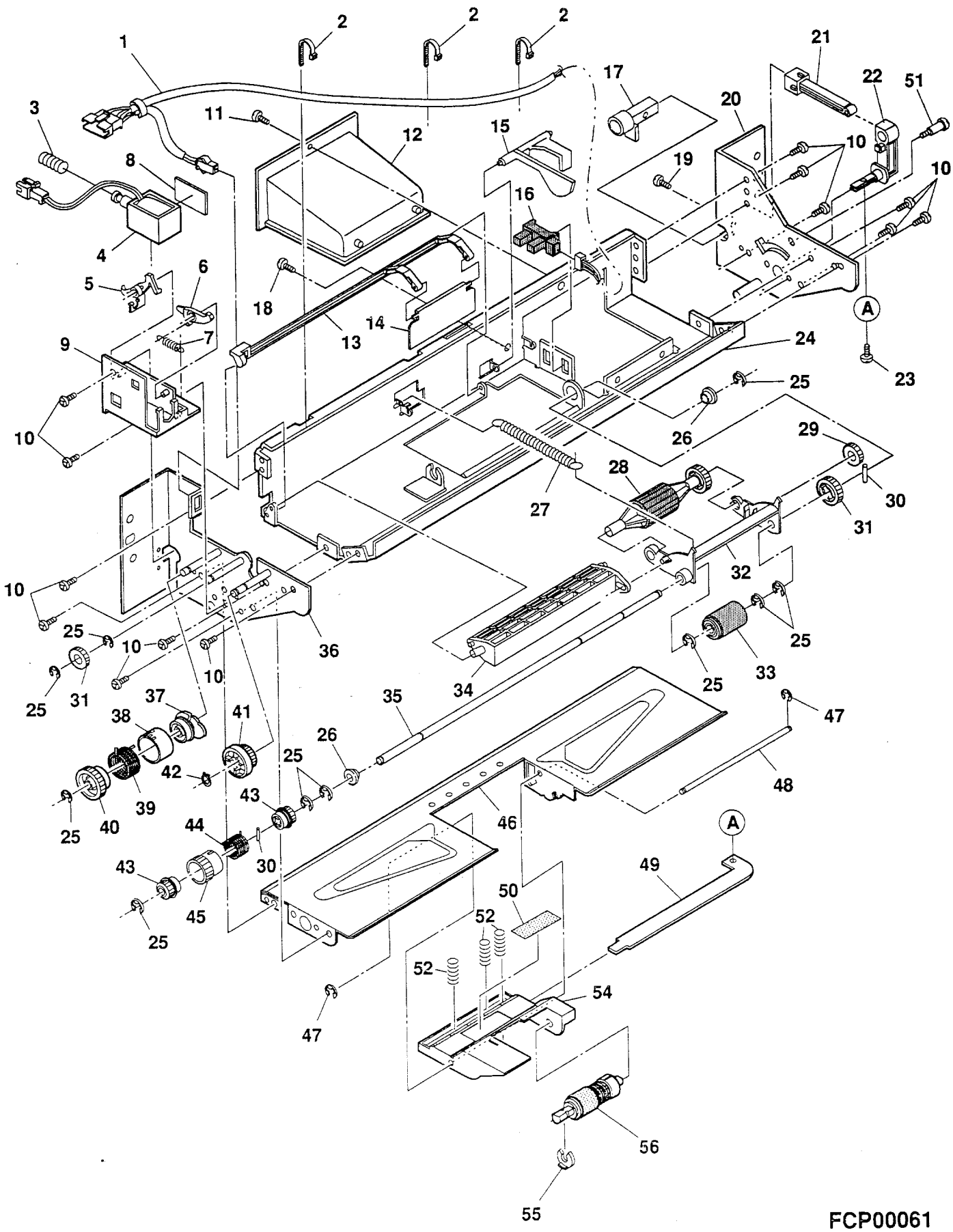
PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
XHBSE40P10000	60- 18	AA	DD		C	
〃	61- 4	AA	DD		C	
〃	65- 61	AA	DD		C	
XHPSD40P04000	9- 46	AA	DD		C	
XHPSD40P10000	49- 24	AA	DD		C	
〃	57- 24	AA	DD		C	
〃	62- 24	AA	DD		C	
XJBSD40P12000	5- 2	AA	DD		C	
XJPSD30P06000	2- 18	AA	DD		C	
XJPSD50P08000	15- 29	AA	DD		C	
XNESD40-32000	11- 28	AA	DD		C	
〃	12- 19	AA	DD		C	
〃	18- 64	AA	DD		C	
XNESD80-65000	46- 27	AA	DD		C	
〃	54- 27	AA	DD		C	
〃	59- 27	AA	DD		C	
XPSSJ20-06000	16- 53	AA	DD	N	C	
XPSSJ20-15000	26- 43	AA	DD	N	C	
〃	40- 43	AA	DD	N	C	
〃	66- 43	AA	DD	N	C	
XRESP20-06000	18- 10	AA	DD		C	
XRESP30-04000	3- 3	AA	DD		C	
〃	12- 59	AA	DD		C	
XRESP30-05000	65- 53	AA	DD		C	
XRESP30-06000	4- 15	AA	DD		C	
〃	18- 13	AA	DD		C	
〃	31- 47	AA	DD		C	
XRESP40-05000	21- 20	AA	DD		C	
〃	22- 6	AA	DD		C	
XRESP40-06000	6- 18	AA	DD		C	
〃	15- 22	AA	DD		C	
〃	16- 42	AA	DD		C	
〃	18- 6	AA	DD		C	
〃	31- 25	AA	DD		C	
〃	64- 19	AA	DD		C	
XRESP50-06000	4- 2	AA	DD		C	
〃	6- 20	AA	DD		C	
〃	6- 34	AA	DD		C	
〃	12- 71	AA	DD		C	
〃	14- 8	AA	DD		C	
〃	16- 3	AA	DD		C	
〃	16- 45	AA	DD		C	
〃	17- 11	AA	DD		C	
〃	18- 32	AA	DD		C	
〃	19- 1	AA	DD		C	
〃	21- 7	AA	DD		C	
〃	22- 5	AA	DD		C	
〃	26- 1	AA	DD		C	
〃	40- 1	AA	DD		C	
〃	43- 20	AA	DD		C	
〃	47- 3	AA	DD		C	
〃	49- 8	AA	DD		C	
〃	50- 3	AA	DD		C	
〃	51- 11	AA	DD		C	
〃	55- 3	AA	DD		C	
〃	57- 8	AA	DD		C	
〃	58- 11	AA	DD		C	
〃	60- 3	AA	DD		C	
〃	62- 8	AA	DD		C	
〃	63- 11	AA	DD		C	
〃	66- 1	AA	DD		C	
XRESP60-08000	28- 12	AA	DD		C	
〃	29- 21	AA	DD		C	
〃	39- 21	AA	DD		C	
〃	52- 21	AA	DD		C	
〃	64- 6	AA	DD		C	
〃	65- 50	AA	DD		C	
XRESP70-08000	9- 14	AA	DD		C	
〃	11- 1	AA	DD		C	
〃	11- 23	AA	DD		C	
〃	12- 3	AA	DD		C	
〃	14- 13	AA	DD		C	
〃	17- 37	AA	DD		C	
〃	18- 16	AA	DD		C	
〃	19- 5	AA	DD		C	
〃	20- 1	AA	DD		C	
〃	21- 9	AA	DD		C	
〃	26- 12	AA	DD		C	
〃	40- 12	AA	DD		C	
〃	43- 45	AA	DD		C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
XRESP70-08000	44- 3	AA	DD		C	
〃	49- 1	AA	DD		C	
〃	50- 4	AA	DD		C	
〃	57- 1	AA	DD		C	
〃	62- 1	AA	DD		C	
〃	65- 21	AA	DD		C	
〃	66- 12	AA	DD		C	
XUBSD30P05000	14- 5	AA	DD		C	
〃	15- 21	AA	DD		C	
XWHSD30-05070	6- 3	AA	DD		C	
〃	30- 17	AA	DD		C	
XWHSD30-05080	17- 9	AA	DD		C	
XWHSD30-08100	30- 15	AA	DD		C	
XWHSD40-08000	12- 18	AA	DD		C	
XWHSD40-08100	17- 22	AA	DD		C	
〃	46- 29	AA	DD		C	
〃	54- 29	AA	DD		C	
〃	59- 29	AA	DD		C	
XWHSD80-16160	19- 4	AA	DD		C	
XWVSD50-06000	20- 50	AA	DD		C	
XXHSP30L06000	3- 6	AB	DD		C	
XXHSP40L25000	46- 26	AB	DD		C	
〃	54- 26	AB	DD		C	
〃	59- 26	AB	DD		C	
XXXSP30L04000	64- 13	AA	DD		C	
XXXSP30L08000	43- 51	AB	DD		C	
〃	44- 19	AB	DD		C	
〃	64- 25	AB	DD		C	
XXXSP40L04000	12- 7	AA	DD		C	
〔0〕						
0FT3006212B9/	35- 60	AM	EG	N	B	
0FT3006263B9/	35- 44	AB	DD	N	B	
0FT3007529B9/	35- 49	AB	DD	N	B	
0FT3010279B9/	35- 150	AC	DJ	N	C	
0FT3010406B9/	35- 148	AC	DJ	N	C	
〃	35- 149	AC	DJ	N	C	
0FT3043398B9/	35- 10	AB	DD	N	C	
0FT3045374B9/	35- 65	AE	DS	N	B	
0FT3062252B9/	35- 145	AE	DS	N	C	
0FT3069737B9/	35- 144	AC	DJ	N	C	
0FT3079589B9/	35- 61	AQ	EQ	N	B	
0FT3080986B9/	35- 53	AB	DD	N	B	
0FT3087743B9/	35- 142	AB	DD	N	C	
0FT3090280B9/	35- 140	AB	DD	N	C	
〃	35- 143	AB	DD	N	C	
〃	35- 162	AB	DD	N	C	
0FT3090523B9/	35- 136	AB	DD	N	C	
0FT3090531B9/	35- 132	AC	DD	N	C	
〃	35- 134	AC	DD	N	C	
〃	35- 141	AC	DD	N	C	
〃	35- 163	AC	DD	N	C	
0FT3095525B9/	35- 131	AB	DD	N	C	
〃	35- 133	AB	DD	N	C	
0FT3099229B9/	35- 135	AC	DJ	N	C	
0FT3106594B9/	35- 12	AE	DS	N	A	
0FT3106993B9/	35- 33	AB	DD	N	B	
0FT3107000B9/	35- 32	AB	DD	N	B	
〃	35- 36	AB	DD	N	B	
〃	35- 38	AB	DD	N	B	
〃	35- 39	AB	DD	N	B	
〃	35- 40	AB	DD	N	B	
0FT3120260B9/	35- 156	AB	DD	N	C	
0FT3127710B9/	35- 64	AG	DX	N	B	
0FT3133834B9/	35- 69	AB	DD	N	C	
0FT3136590B9/	35- 12	AE	DS	N	A	
0FT3138496B9/	35- 155	AG	DX	N	C	
0FT3145182B9/	35- 64	AH	DX	N	B	
0FT3149129B9/	35- 11	AE	DS	N	A	
0FT3163008B9/	35- 144	AE	DS	N	C	
0FT3163598B9/	35- 26	AQ	EZ	N	B	
0FT3184161B9/	35- 69	AB	DD	N	C	
0FT3184390B9/	35- 21	AE	DS	N	C	
0FT3184404B9/	35- 22	AE	DS	N	C	
0FT3184412B9/	35- 24	AE	DS	N	C	
0FT3199827B9/	35- 29	AH	DX	N	B	
0FT3202569B9/	35- 6	AB	DD	N	C	
0FT3212254B9/	35- 11	AE	DS	N	A	
0FT3239829B9/	35- 106	AB	DD	N	C	
0FT3268373B9/	35- 28	AH	DX	N	B	
0FT3272486B9/	35- 30	AH	DX	N	B	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
0FT3286746B9/	35- 51	AG	DX	N	B	
0FT3291235B9/	35- 46	AB	DD	N	B	
0FT3299783B9/	35- 27	AQ	EQ	N	B	
0FT3312208B9/	35- 54	AM	EG	N	B	
0FT3313638B9/	35- 51	AH	DX	N	B	
0FT3322335B9/	35- 31	AC	DD	N	B	
0FT3334325B9/	35- 164	AB	DD	N	C	
0FT3339440B9/	35- 5	AC	DD	N	C	
0FT3340848B9/	35- 56	AK	EB	N	B	
0FT3340872B9/	35- 56	AM	EG	N	B	
0FT3347680B9/	35- 146	AC	DJ	N	C	
0FT3355128B9/	35- 57	AE	DJ	N	B	
0FT3355705B9/	35- 43	AB	DD	N	B	
//	35- 50	AB	DD	N	B	
0FT3355721B9/	35- 45	AB	DD	N	B	
0FT3362604B9/	35- 55	AZ	GD	N	B	
0FT3370860B9/	35- 158	AB	DD	N	C	
0FT3375323B9/	35- 23	AP	EQ	N	C	
0FT3397858B9/	35- 15	AC	DD	N	C	
0FT3402142B9/	35- 31	AD	DJ	N	B	
0FT3405087B9/	35- 52	AG	DX	N	B	
0FT3405095B9/	35- 59	AQ	EQ	N	B	
0FT3418340B9/	35- 102	AA	DD	N	C	
//	35- 107	AA	DD	N	C	
0FT3418383B9/	35- 101	AA	DD	N	C	
0FT3418510B9/	35- 88	AA	DD	N	C	
//	35- 89	AA	DD	N	C	
//	35- 96	AA	DD	N	C	
//	35- 100	AA	DD	N	C	
//	35- 103	AA	DD	N	C	
//	35- 115	AA	DD	N	C	
0FT3418537B9/	35- 111	AA	DD	N	C	
0FT3418553B9/	35- 113	AA	DD	N	C	
0FT3418561B9/	35- 95	AA	DD	N	C	
//	35- 97	AA	DD	N	C	
0FT3418618B9/	35- 93	AA	DD	N	C	
//	35- 99	AA	DD	N	C	
//	35- 105	AA	DD	N	C	
0FT3418642B9/	35- 108	AA	DD	N	C	
0FT3418715B9/	35- 87	AA	DD	N	C	
//	35- 91	AA	DD	N	C	
//	35- 104	AA	DD	N	C	
//	35- 109	AA	DD	N	C	
//	35- 117	AA	DD	N	C	
0FT3418766B9/	35- 87	AA	DD	N	C	
//	35- 94	AA	DD	N	C	
0FT3418804B9/	35- 98	AA	DD	N	C	
//	35- 110	AA	DD	N	C	
0FT3419274B9/	35- 78	AA	DD	N	C	
0FT3419363B9/	35- 79	AA	DD	N	C	
0FT3419371B9/	35- 83	AA	DD	N	C	
0FT3419401B9/	35- 81	AA	DD	N	C	
//	35- 112	AA	DD	N	C	
0FT3419452B9/	35- 114	AA	DD	N	C	
0FT3419487B9/	35- 85	AA	DD	N	C	
0FT3419495B9/	35- 80	AA	DD	N	C	
//	35- 116	AA	DD	N	C	
0FT3419525B9/	35- 84	AA	DD	N	C	
0FT3419541B9/	35- 82	AA	DD	N	C	
//	35- 92	AA	DD	N	C	
0FT3419681B9/	35- 90	AA	DD	N	C	
0FT3419746B9/	35- 90	AA	DD	N	C	
0FT3419789B9/	35- 86	AA	DD	N	C	
0FT3423816B9/	35- 7	AA	DD	N	C	
//	35- 159	AA	DD	N	C	
0FT3426106B9/	35- 145	AC	DJ	N	C	
//	35- 145	AC	DJ	N	C	
0FT3426459B9/	35- 13	AR	EZ	N	A	
0FT3429148B9/	35- 153	AC	DD	N	C	
0FT3432963B9/	35- 9	AA	DD	N	C	
//	35- 160	AA	DD	N	C	
0FT3436125B9/	35- 127	AC	DD	N	C	
0FT3437582B9/	35- 25	AB	DD	N	C	
0FT3453561B9/	35- 161	AA	DD	N	C	
0FT3455742B9/	35- 8	AA	DD	N	C	
0FT3460010B9/	35- 57	AH	DX	N	B	
0FT3463036B9/	35- 126	AE	DS	N	C	
//	35- 128	AE	DS	N	C	
0FT3463044B9/	35- 122	AH	DX	N	C	
0FT3463052B9/	35- 123	AC	DD	N	C	

PARTS CODE	NO.	PRICE R. Ex.	PRICE R. Ja.	NEW	P/R	
0FT3463052B9/	35- 130	AC	DD	N	C	
0FT3463087B9/	35- 129	AD	DJ	N	C	
0FT3463095B9/	35- 124	AF	DS	N	C	
0FT3463109B9/	35- 121	AH	DX	N	C	
0FT3463125B9/	35- 127	AC	DD	N	C	
0FT3463192B9/	35- 120	AD	DJ	N	C	
0FT3463206B9/	35- 119	AD	DJ	N	C	
0FT3515109B9/	35- 147	AC	DJ	N	C	
0FT3518469B9/	35- 26	AP	EQ	N	B	
0FT3523314B9/	35- 4	AG	DX	N	C	
0FT3530043B9/	35- 146	AD	DJ	N	C	
0FT3554147B9/	35- 55	AX	FX	N	B	
0FT3555402B9/	35- 14	AB	DD	N	C	
0FT3562433B9/	35- 70	AB	DD	N	C	
0FT3562468B9/	35- 71	AB	DD	N	C	
0FT3562557B9/	35- 72	AB	DD	N	C	
0FT3563219B9/	35- 76	AB	DD	N	C	
0FT3563227B9/	35- 77	AB	DD	N	C	
0FT3563251B9/	35- 67	AB	DD	N	C	
0FT3563286B9/	35- 73	AB	DD	N	C	
//	35- 74	AB	DD	N	C	
0FT3563316B9/	35- 75	AB	DD	N	C	
0FT3563324B9/	35- 68	AB	DD	N	C	
0FT3563464B9/	35- 66	AB	DD	N	C	
0FT3563480B9/	35- 66	AB	DD	N	C	
0FT3574342B9/	35- 47	AB	DD	N	B	
//	35- 48	AB	DD	N	B	
0FT3581160B9/	35- 125	AM	EG	N	C	
0FT3586928B9/	35- 41	AC	DD	N	B	
0FT3596176B9/	35- 154	AN	EQ	N	C	
0FT3600157B9/	35- 18	AP	EQ	N	C	
0FT3601552B9/	35- 34	AC	DD	N	B	
//	35- 35	AC	DD	N	B	
0FT3606155B9/	35- 137	AN	EQ	N	C	
0FT3606163B9/	35- 138	AG	DX	N	C	
0FT3606732B9/	35- 37	AC	DD	N	B	
//	35- 42	AC	DD	N	B	
0FT3611361B9/	35- 139	AD	DJ	N	C	
0FT3611582B9/	35- 118	AY	GD	N	C	
0FT3611957B9/	35- 118	BA	GJ	N	C	
0FT3613135B9/	35- 19	AV	FQ	N	C	
0FT3629570B9/	35- 63	AE	DJ	N	B	
0FT3635465B9/	35- 13	AR	EZ	N	A	
0FT3639789B9/	35- 58	AQ	EQ	N	B	
0FT3641961B9/	35- 137	AH	DX	N	C	
//	35- 138	AH	DX	N	C	
0FT3644537B9/	35- 62	AE	DJ	N	B	
0FT3649989B9/	35- 157	AD	DJ	N	C	
0FT3654583B9/	35- 16	AG	DX	N	C	
0FT3655865B9/	35- 17	AY	GD	N	C	
0FT3655873B9/	35- 17	AZ	GD	N	C	
0FT3655881B9/	35- 20	AY	GD	N	C	
0FT3655954B9/	35- 152	AV	FQ	N	C	
0FT3655962B9/	35- 1	AG	DX	N	C	
0FT3660621B9/	35- 2	AV	FQ	N	C	
0FT3661636B9/	35- 151	AV	FQ	N	C	
0FT3661644B9/	35- 3	AM	EG	N	C	

31 手差しマルチ給紙ユニット(Manual multi paper feeding unit)



FCP00061

32 メイン基板(Main PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PSHEP3223FCZZ	AB	DD	N	C	IC socket protect sheet	ICソケットホゴシート
2	QCNCM0798FCZZ	AE	DJ		C	Connector (16pin) [CN-L]	コネクター
3	QCNCM0800FCZZ	AE	DS	N	C	Connector (24pin) [CN-F,CN-K]	コネクター
4	QCNCM0806FCZZ	AE	DS	N	C	Connector (32pin) [CN-B,CN-M]	コネクター
5	QCNCM0807FCZZ	AE	DS	N	C	Connector (30pin) [CN-C,CN-I]	コネクター
6	QCNCM0808FCZZ	AE	DS	N	C	Connector (28pin) [CN-D]	コネクター
7	QCNCM0809FCZZ	AE	DS	N	C	Connector (26pin) [CN-H]	コネクター
8	QCNCM7014SC0H	AB	DD		C	Connector (8pin) [CN-G]	コネクター
9	QCNCM7014SC0i	AB	DD		C	Connector (9pin) [CN-J]	コネクター
10	QCNCW0749FCZZ	AB	DD	N	C	Connector (7pin) [CN-E]	コネクター
11	QCNCW0805FCZZ	AF	DS	N	C	Connector (20pin) [CN-A]	コネクター
12	QSOCZ2051SC32	AC	DJ		C	32pin IC socket (For IC116)	32ピンICソケット
13	QSOCZ6428ACZZ	AE	DS		C	28pin IC socket (1CC05-028-360T)(For IC115)	28P ICソケット
14	RCRSQ5030SCZZ	AG	DX		B	Oscillator AT-49(8MHZ) [X1]	ハッシンシ
15	RH-DZ0016FCZZ	AB	DD		C	Diode (MA700) [D105]	ダイオード
16	RMPTC3102QCJB	AA	DD	N	B	Block resistor (1.0KΩ 1/8W ±5%) [BR102,106,107]	ブロックテイコウ
17	RMPTC4103QCJB	AD	DJ		C	Block resistor (10KΩ×4 1/8W ±5%) [BR111]	ブロックテイコウ
18	RMPTC4122QCJB	AB	DD		B	Block resistor (1.2KΩ×4 1/8W ±5%) [BR103]	ブロックテイコウ
19	RMPTC4222QCJB	AA	DD		B	Block resistor (2.2KΩ×4 1/8W ±5%) [BR101,301,302]	ブロックテイコウ
20	RMPTC4272QCJB	AA	DD		C	Block resistor (2.7KΩ×4 1/8W ±5%) [BR121]	ブロックテイコウ
21	RMPTC4562QCJB	AA	DD		B	Block resistor (5.6KΩ×4 1/8W ±5%) [BR120,124]	ブロックテイコウ
22	RMPTC5272QCJB	AB	DD		C	Block resistor (2.7KΩ×5 1/8W ±5%) [BR123]	ブロックテイコウ
23	RMPTC5562QCJB	AA	DD		B	Block resistor (5.6KΩ×5 1/8W ±5%) [BR115,119]	ブロックテイコウ
24	RMPTC6103QCJB	AB	DD		C	Block resistor (10KΩ×6 1/8W ±5%) [BR117]	ブロックテイコウ
25	RMPTC6272QCJB	AC	DD		C	Block resistor (2.7KΩ×6 1/8W ±5%) [BR108]	ブロックテイコウ
26	RMPTC6562QCJB	AB	DD		B	Block resistor (5.6KΩ×6 1/8W ±5%) [BR104,114,118]	ブロックテイコウ
27	RMPTC8103QCJB	AC	DD		B	Block resistor (10KΩ×8 1/8W ±5%) [BR109,110,113]	ブロックテイコウ
28	VCCCPU1HH220J	AA	DD		C	Capacitor (50WV 22PF) [C112,113]	コンデンサー
29	VCEAGU1CW107M	AB	DD		C	Capacitor (16WV 100μF) [C115]	コンデンサー
30	VCEAGU1CW477M	AC	DD		C	Capacitor (16WV 470μF) [C122,124,307]	コンデンサー
31	VCEAGU1HW105M	AA	DD		C	Capacitor (50WV 1.0μF) [C118]	コンデンサー
32	VCEAGU1HW224M	AA	DD		C	Capacitor (50WV 0.22μF) [C166,167]	コンデンサー
33	VCEAGU1VW106M	AA	DD		C	Capacitor (35WV 10μF) [C102]	コンデンサー
34	VCEAGU1VW107M	AB	DD		C	Capacitor (35WV 100μF) [C104]	コンデンサー
35	VCEAGU1VW335M	AA	DD		C	Capacitor (35WV 3.3μF) [C119,120]	コンデンサー
36	VCEAGU1VW476M	AB	DD		C	Capacitor (35WV 47μF) [C105]	コンデンサー
37	VCEAGU1VW477M	AD	DJ		C	Capacitor (35WV 470μF) [C123]	コンデンサー
38	VCKYTQ1HB102K	AA	DD		C	Capacitor(50WV 1000pF) [C126~135,137~140, 142~152,155,160,177,178,180~183,186~189,301~306]	コンデンサー
40	VCQYNU1HM102K	AA	DD		C	Capacitor (50WV 1000PF) [C110]	コンデンサー
41	VCQYNU1HM103K	AA	DD		C	Capacitor (50WV 0.010μF) [C116,117]	コンデンサー
42	VCQYNU1HM104K	AB	DD		C	Capacitor (50WV 0.10μF) [C101,106,107,108,109,111]	コンデンサー
43	VHDDAN202K/-1	AB	DD		B	Diode (DAN202K) [D106,115,122~126,128,132,136,143,145,150,303]	ダイオード
44	VHDDAP202K/-1	AB	DD		B	Diode (DAP202K) [D129,133,137,304]	ダイオード
45	VHDS3V10///-1	AC	DJ		B	Diode (S3V10) [D101]	ダイオード
46	VHDW06B////-1	AE	DJ		B	Diode (W06B) [D140,141,301,302,305,307]	ダイオード
47	VHD1SR124-200	AB	DD		B	Diode (1SR124-200) [D102,103,104]	ダイオード
48	VHEHZ6A1///-1	AB	DD		B	Zener diode (HZ6A1) [ZD103,104]	ツェナーダイオード
49	VHERD22FB//-1	AD	DJ		B	Zener diode (RD22FB) [ZD101,102,105]	ツェナーダイオード
50	VHiHD8-570Z01	BG	HG	N	B	IC (HD8-570Z01) [IC113]	IC
51	VHiiR2C23//-1	AF	DS		B	IC (IR2C23) [IC109,110,111,122,123,124,125]	IC
52	VHiNJM2901M-1	AE	DS		B	IC (NJM2901M) [IC133,134]	IC
53	VHiNJM2903M/-	AD	DJ		B	IC (NJM2903M) [IC137]	IC
54	VHiSLA6023/-1	AR	EZ	N	B	IC (SLA6023) [IC112]	IC
55	VHiSN74LS04NS	AF	DS		B	IC (SN74LS04) [IC145,146,147]	IC
56	VHiSN74LS08NS	AF	DS		B	IC (SN74LS08) [IC135]	IC
57	VHiSN74LS14NS	AL	EG		B	IC (SN74LS14NS) [IC142]	IC
58	VHiSN74LS32NS	AF	DS		B	IC (SN74LS32NS) [IC144]	IC
59	VHiSTA301A/-1	AK	EB		B	IC (STA301A) [IC107]	IC
60	VHiTA7291S/-1	AF	DS		B	IC (TA7291S) [IC104]	IC
61	VHiTD62503F-1	AF	DS	N	B	IC (TD62503F) [IC126,128,129,132,141]	IC
62	VHiTD62583F-1	AH	DX	N	B	IC (TD62583F) [IC143]	IC
63	VHiTE7750//-1	AW	FX		C	IC (TE7750) [IC114]	IC
64	VHiULN2003AN1	AE	DJ	N	B	IC (ULN2003AN1) [IC102,105,106,108,117,119,120,121]	IC
65	VHiUPC1246C-1	AK	EB	N	B	IC (UPC1246C) [IC101]	IC
66	VHiUPC358G2E1	AD	DJ	N	B	IC (UPC358G2E1) [IC130]	IC
67	VHi27C01001FC	AZ	GD	N	B	IC (27C01001FC) [IC116]	IC
68	VHi28C64-15-1	AZ	GD	N	B	IC (28C64-15) [IC115]	IC
69	VHi74LS139ANS	AE	DS	N	B	IC (74LS139ANS) [IC138,139]	IC
70	VRS-ST3ABR22J	AA	DD	N	C	Resistor (1W 0.22Ω ±5%) [R103]	テイコウ
71	VRS-ST3AB180J	AA	DD	N	C	Resistor (1W 18Ω ±5%) [R223]	テイコウ
72	VRS-TS2AD101J	AA	DD		C	Resistor (1/10W 100Ω ±5%) [R161,174,182,198,200,202,203]	テイコウ
73	VRS-TS2AD102F	AA	DD		C	Resistor (1/10W 1.0KΩ ±1%) [R135]	テイコウ
74	VRS-TS2AD102J	AA	DD		C	Resistor (1/10W 1.0KΩ ±5%) [R163,176,180]	テイコウ
75	VRS-TS2AD103F	AA	DD		C	Resistor (1/10W 10KΩ ±1%) [R137]	テイコウ
76	VRS-TS2AD103J	AA	DD		C	Resistor(1/10W 10KΩ ±5%) [R115,119,138,139,146,148, 154,157,158,169,197,199,201,302,304,305,307,309]	テイコウ
77	VRS-TS2AD104J	AA	DD		C	Resistor (1/10W 100KΩ ±5%) [R110]	テイコウ
78	VRS-TS2AD122J	AA	DD		C	Resistor (1/10W 1.2KΩ ±5%) [R150,179,190,192,194,306]	テイコウ

32 メイン基板(Main PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
79	VRS-TS2AD133F	AA	DD		C	Resistor (1/10W 13KΩ ±1%) [R225]	テイコウ
80	VRS-TS2AD151J	AA	DD		C	Resistor (1/10W 150Ω ±5%) [R134,159]	テイコウ
81	VRS-TS2AD152F	AA	DD	N	C	Resistor (1/10W 1.5KΩ ±1%) [R141,144,153]	テイコウ
82	VRS-TS2AD153F	AA	DD		C	Resistor (1/10W 15KΩ ±1%) [R113,143,229]	テイコウ
83	VRS-TS2AD201J	AG	DS		C	Resistor (1/10W 200Ω ±5%) [R178]	テイコウ
84	VRS-TS2AD203J	AA	DD		C	Resistor (1/10W 20KΩ ±5%) [R149,166,188]	テイコウ
85	VRS-TS2AD204J	AA	DD		C	Resistor (1/10W 200KΩ ±5%) [R171]	テイコウ
86	VRS-TS2AD222J	AA	DD		C	Resistor(1/10W 2.2KΩ ±5%) [R116,125,167,168,172,184,185,186,187,204,205,222,311]	テイコウ
87	VRS-TS2AD223J	AA	DD		C	Resistor (1/10W 22KΩ ±5%) [R109,210,303]	テイコウ
88	VRS-TS2AD224J	AA	DD		C	Resistor (1/10W 220KΩ ±5%) [R126,160,181]	テイコウ
89	VRS-TS2AD242J	AA	DD		C	Resistor (1/10W 2.4KΩ ±5%) [R170,308,310]	テイコウ
90	VRS-TS2AD272J	AA	DD		C	Resistor (1/10W 2.7KΩ ±5%) [R108]	テイコウ
91	VRS-TS2AD301J	AA	DD		C	Resistor (1/10W 300Ω ±5%) [R121,224]	テイコウ
92	VRS-TS2AD332F	AA	DD	N	C	Resistor (1/10W 3.3KΩ ±1%) [R130]	テイコウ
93	VRS-TS2AD363J	AA	DD		C	Resistor (1/10W 36KΩ ±5%) [R127]	テイコウ
94	VRS-TS2AD393J	AA	DD		C	Resistor (1/10W 39KΩ ±5%) [R131,140]	テイコウ
95	VRS-TS2AD431J	AA	DD		C	Resistor (1/10W 430Ω ±5%) [R214]	テイコウ
96	VRS-TS2AD432F	AA	DD	N	C	Resistor (1/10W 4.3KΩ ±1%) [R226]	テイコウ
97	VRS-TS2AD471J	AA	DD		C	Resistor (1/10W 470Ω ±5%) [R189,191,193]	テイコウ
98	VRS-TS2AD473J	AA	DD		C	Resistor (1/10W 47KΩ ±5%) [R208,209,317,318]	テイコウ
99	VRS-TS2AD562J	AA	DD		C	Resistor (1/10W 5.6KΩ ±5%) [R195,230,231,312~315]	テイコウ
100	VRS-TS2AD563J	AA	DD		C	Resistor (1/10W 56KΩ ±5%) [R133]	テイコウ
101	VRS-TS2AD622F	AA	DD		C	Resistor (1/10W 6.2KΩ ±1%) [R227]	テイコウ
102	VRS-TS2AD624J	AA	DD	N	C	Resistor (1/10W 620KΩ ±5%) [R151]	テイコウ
103	VRS-TS2AD681J	AA	DD		C	Resistor (1/10W 680Ω ±5%) [R175,177,183]	テイコウ
104	VRS-TS2AD682F	AA	DD		C	Resistor (1/10W 6.8KΩ ±1%) [R132]	テイコウ
105	VRS-TS2AD752J	AA	DD		C	Resistor (1/10W 7.5KΩ ±5%) [R156]	テイコウ
106	VRS-TS2AD911J	AA	DD		C	Resistor (1/10W 910Ω ±5%) [R123,128,173,301]	テイコウ
107	VRS-TS2AD912F	AA	DD	N	C	Resistor (1/10W 9.1KΩ ±1%) [R228]	テイコウ
108	VRS-TS2AD913J	AA	DD		C	Resistor (1/10W 91KΩ ±5%) [R124]	テイコウ
109	VSDTC114YK/-1	AC	DD		B	Transistor (DTC114YE) [Q103,104]	トランジスター
110	VS2SC945///-1	AD	DJ		B	Transistor (2SC945) [Q101,102]	トランジスタ
	ユニット (Unit)						
901	CPWBN0928FC51	CD	UF	N	E	Main PWB	メインキバン

33 操作基板(Operation PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PSPAP0586FCZZ	AB	DD	N	C	Copy quantity display spacer	マイスウヒョジスペーサー
2	PSPAP0587FCZZ	AB	DD	N	C	Magnification rafio display spacer	バイリツヒョウジスペーサー
3	PSPAP0588FCZZ	AB	DD	N	C	Copy key spacer	コピーキースペーサー
4	QCNCM0811FCZZ	AC	DD	N	C	Connector (9pin) [CN-B]	コネクター
5	QCNCM0818FCZZ	AF	DS	N	C	Connector (22pin) [CN-C]	コネクター
6	QCNCW0810FCZZ	AF	DS	N	C	Connector (20pin) [CN-A]	コネクター
7	QSW-P0444FCZZ	AB	DD	N	B	Tact switch (SKHVBB) [PAK,CAK,1K~9K,0K,CLK]	タクトスイッチ
	QSW-P0444FCZZ	AB	DD	N	B	Tact switch(SKHVBB) [PSK,ZDK,ZUK, ISK,RDK,ELK,NOK,EMK,EDK,EUK,DPK,EEK,SFK,SDK,DUK,SOK]	タクトスイッチ
8	QSW-P0449FCZZ	AD	DJ	N	B	Tact switch (SKHWAC) [PSW]	タクトスイッチ
9	RC-KZ0287FCZZ	AA	DD		C	Capacitor (22000pF) [C101,104,105,106,111,112,113]	コンデンサー
10	RCRS-0007FCZZ	AD	DJ		B	Crystal (CSB480EB) [X1]	クリスタル
11	RMPTC5681QCJB	AB	DD	N	B	Block resistor (680Ω×5 1/8W ±5%) [BR102,103,111,113,114]	ブロックテイコウ
12	RMPTC8681QCJB	AC	DD		B	Block resistor (680Ω×8 1/8W ±5%) [BR101,104,106,107,108,109]	ブロックテイコウ
13	RMPTW7681QCJE	AC	DD		B	Block resistor (680Ω×7 1/4W ±5%) [BR105,110,112,115,116]	ブロックテイコウ
14	VCCCPU1HH101J	AB	DD		C	Capacitor (50WV 100PF) [C102,103]	コンデンサー
15	VCEAJU1CW476M	AB	DD		C	Capacitor (16WV 47μF) [C1,2]	コンデンサー
16	VCKYPU1HB102K	AA	DD		C	Capacitor (50WV 1000PF) [C107~110]	コンデンサー
17	VHDDSS133HV-1	AA	DD		B	Diode (DSS133HV) [D1~9]	ダイオード
18	VHiLC7935//-1	AN	EQ		B	IC (LC7935) [IC102,103,104]	IC
19	VHiLR3717M/-1	AH	DX		B	IC (LR3717M) [IC101]	IC
20	VHiSN74LS14-1	AM	EQ		B	IC (SN74LS14) [IC105]	IC
21	VHPGL3KG8//-1	AB	DD	N	B	Photo transistor (GL3KG8) [CTNL,OMSGL,PMSGL‥each of 4pcs]	フォトトランジスター(ミドリ)
22	VHPGL3PR8//-1	AA	DD		B	Photo transistor (GL3PR8) [SMSGL‥each of 4pcs]	フォトトランジスター(アカ)
23	VHPGL9E030/-1	AH	DX	N	B	Photo transistor (GL9E030) [LEDM1,LEDM2,LEDM3]	フォトトランジスター
24	VHPLB-602MA1/	AL	EG		B	Photo transistor (LB-602MA1) [LEDN]	フォトトランジスター
25	VHPLD603MG/-1	AE	DS		B	Photo transistor (LD603MG) [READYL]	フォトトランジスター
26	VHPSLR-320MCA	AB	DD	N	B	Photo transistor (SLR-320MCA) [PAUL,CSL1~5,PSL1~6,OSL1~5,AEL,MEL,PHL,EL1~9,DPCL]	フォトトランジスター(ミドリ)
	VHPSLR-320MCA	AB	DD	N	B	Photo transistor(SLR-320MCA) [EDGEL,SFTL,SDEL,SDOL,DDL,DSL,SOTL,SSOTL,GRPL,APL,AML]	フォトトランジスター(ミドリ)
27	VHPSLR-320VCA	AB	DD	N	B	Photo transistor (SLR-320VCA) [MNTL,DVL,TFL,TEL,PEL,JAML,JL1~8]	フォトトランジスター(アカ)
28	VRD-RC2EY241J	AA	DD		C	Resistor (1/4W 240Ω ±5%) [R1,2,5,6,7,8]	テイコウ
29	VRD-RC2EY681J	AA	DD		C	Resistor (1/4W 680Ω ±5%) [R3,4,9]	テイコウ
30	VSDTC114YS/-1	AB	DD		C	Transistor (DTC114YS) [Q101]	トランジスター

33 操作基板(Operation PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
31	QSW-P0444FCZZ	AB	DD	N	B	Tact switch (SKHVBB)(SF-2022･･Export)	[OSK]	タクトスイッチ
32	VHPSLR-320MCA	AB	DD	N	B	Photo transistor (SLR-320MCA)(Japan only)	[CSL6,PSL7,OSL6]	フォトトランジスター(ミドリ)
	ユニット (Unit)							
901	CPWBF0929FC51	BS	NE	N	E	Operation PWB (Japan only)		ソウサキバン B9 J
	CPWBF0929FC52	BS	NE	N	E	Operation PWB (Export)	(SF-2022)	ソウサキバン B9 A
	CPWBF0929FC53	BS	NE	N	E	Operation PWB (Export)	(SF-2027)	ソウサキバン B9 C

34 AC回路基板(AC circuit PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
1	DHAi-2109FCZZ	AC	DJ	N	C	AC PWB Earth harness		ACキバンアースハーネス
2	PRDAF0046FCZZ	AD	DJ		C	Heat sink		ホウネツバン
3	PRDAR0048FCZZ	AC	DJ		C	Heat sink		ホウネツバン
4	PSHEZ2727FCZZ	AC	DJ		C	Insulator sheet for TD202 (Japan,100V series)		ゼツエンシート
6	QCNCW0445FCZZ	AA	DD		C	Connector (Japan only)	[CN204]	コネクター
7	QCNCW0455FCZZ	AC	DJ		C	Connector (15pin)	[CN203]	コネクター
8	QCNCW0690FCZZ	AB	DD		C	Connector (2Pin)	[CN202]	コネクター
10	QCNCW0815FCZZ	AE	DJ	N	C	Connector (8Pin)	[CN201]	コネクター
⚠	QFS-A2700QCZZ	AD	DJ		A	Fuse (20A 125V) (Japan only)	[F201,202]	ヒューズ
⚠ 11	QFS-B0030FCZZ	AH	DS		A	Fuse (15A 250V) (Export･･100V series)	[F201]	ヒューズ
⚠	QFS-C1500QCZZ	AF	DS		A	Fuse(10A 240V) (200V series)	[F201]	ヒューズ
12	QFSHD0001QCZZ	AA	DD		C	Fuse holder (For F201,202)		ヒューズホルダー
13	QTANP0115FCZZ	AB	DD		C	Terminal (T86032)		タフタンシ
14	RC-QZ0117FCZZ	AD	DJ		C	Capacitor (50WV 0.47μF)	[C209,210]	コンデンサー
15	RC-QZ0314FCZZ	AH	DX		C	Capacitor (XYE224472)	[C201]	コンデンサー
16	RC-QZ0324FCZZ	AE	DS		C	Capacitor (XE224)(200V series)	[C202,203]	コンデンサー
17	RCiLF0027FCZZ	AQ	EZ		C	Coil (1mH 10A)(200V series)	[L201]	コイル
18	RCiLF0031FCZZ	AR	EZ		C	Coil (100μH 8A)(200V series)	[L202,203]	コイル
20	RCiLF0048FCZZ	AG	DS		C	Coil (100μH 3A)(Japan,100V series)	[L204]	コイル
	RCiLF0043FCZZ	AL	EG		C	Coil (6mH)(200V series)	[L204]	コイル
21	RH-DZ0019FCZZ	AG	DX		B	Diode (DSA-242MA)(Japan,100V series)	[A201]	ダイオード
22	RMPTA0030FCZZ	AE	DJ		B	CR mix part (AU1201)(Japan,100V series)	[CR201,202]	CRフクゴウキ
	RMPTA0021FCZZ	AH	DX		B	CR mix part (CR201,202)(200V series)	[CR201,202]	CRフクゴウキ
25	RR-WZ0328FCZZ	AD	DJ		C	Resistor (5W 3Ω)(Japan,100V series)	[R201]	テイコウ
26	RR-XZ0337FCZZ	AC	DJ		B	Fuse resistor (1W 220Ω)(Japan,100V series)	[FR201]	ヒューズテイコウ
	RR-XZ0338FCZZ	AC	DJ		B	Fuse resistor (1W 820Ω)(200V series)	[FR201]	ヒューズテイコウ
⚠ 27	RRLYD4421QCZZ	AQ	EZ	N	B	Relay (Japan,100V series)	[RY202]	リレー
⚠	RRLYD4420QCZZ	AQ	EZ	N	B	Relay (200V series)	[RY202]	リレー
⚠ 28	RRLYD6121QCZZ	AM	EG		B	Relay (Japan,100V series)	[RY201]	リレー
⚠	RRLYD6120QCZZ	AP	EQ		B	Relay (200V series)	[RY201]	リレー
29	VCEAGA1VW107M	AB	DD		C	Capacitor (35WV 100μF)	[C213]	コンデンサー
30	VCQYNU1HM104K	AB	DD		C	Capacitor (50WV 0.10μF)	[C206,214]	コンデンサー
31	VCQYNU1HM223K	AA	DD		C	Capacitor (50WV 0.022μF)(Japan,100V series)	[C212]	コンデンサー
	VCQYNU1HM473K	AB	DD		C	Capacitor (50WV 0.047μF)(200V series)	[C212]	コンデンサー
32	VHDRM10Z///-1	AC	DJ		B	Diode (RM10Z)(Japan only)	[D202]	ダイオード
33	VHDS1WBA60S-1	AD	DJ		B	Diode (S1WBA60S)	[RE201]	ダイオード
34	VHDW06B////-1	AE	DJ		B	Diode (W06B)	[D201]	ダイオード
35	VHiSHN002//-1	AU	FQ	N	B	IC (SHN002)	[IC201]	IC
36	VHiTM1641P-L/	AM	EG		B	IC (TM1641P-L)(Japan,100V series)	[TD202]	IC
⚠ 37	VHRS21MD3V/-1	AE	DS		B	Photo thyristor (S21MD3V)(Japan,100V series)	[SSR202]	フォトサイリスター
⚠	VHRS21MD3VY-1	AG	DS	N	B	Photo thyristor (S21MD3VY)(200V series)	[SSR202]	フォトサイリスター
⚠ 38	VHRS21ME4//-1	AH	DX		B	Diode (S21ME4)(Japan,100V series)	[SSR201]	ダイオード
⚠	VHRS21ME4Y/-1	AH	DX	N	B	Diode (S21ME4Y)(200V series)	[SSR201]	ダイオード
⚠ 39	VHSAC12DSM/-1	AK	EB		B	Triac (AC12DSM)(Japan,100V series)	[TD201]	トライアック
⚠	VHSAC08FSM/-1	AK	EB		B	Triac (AC08FSM)(200V series)	[TD201]	トライアック
40	VHSBCR16PM-12	AK	EB		B	Triac (BCR16PM-12)(200V series)	[TD202]	トライアック
41	VRD-RB2EY105J	AA	DD		C	Resistor (1/4W 1.0MΩ ±5%)(Japan,100V series)	[R207]	テイコウ
	VRD-RB2EY474J	AA	DD		C	Resistor (1/4W 470KΩ ±5%)(200V series)	[R207]	テイコウ
42	VRNRB2EK2003F	AA	DD		C	Resistor (1/4W 200KΩ ±1%)(Japan,100V series)	[R215,216]	テイコウ
	VRNRB2EK4123F	AA	DD		C	Resistor (1/4W 412KΩ ±1%)(200V series)	[R215,216]	テイコウ
44	VRS-HT2HA101J	AA	DD		C	Resistor (1/2W 100Ω ±5%)	[R203,218]	テイコウ
45	VRS-HT2HA121J	AA	DD		C	Resistor (1/2W 120Ω ±5%)(Japan,100V series)	[R204,217]	テイコウ
	VRS-HT2HA201J	AA	DD		C	Resistor (1/2W 200Ω ±5%)(200V series)	[R204,217]	テイコウ
46	VRS-RE3LA103J	AB	DD		C	Resistor (3W 10KΩ ±5%)	[R214]	テイコウ
47	XBPSD30P10K00	AA	DD		C	Screw (3×10K)(For TD201)		ビス
48	RCiLF0045FCZZ	AN	EQ		C	Earth indactor coil (200V series)		アースインダクターコイル
	ユニット (Unit)							
⚠	CPWBF0942FC51	BM	LJ	N	E	AC circuit PWB (Japan only)		ACカイロギバン J
⚠ 901	CPWBF0930FC51	BM	LJ	N	E	AC circuit PWB (100V series)		ACカイロキバン100
⚠	CPWBF0931FC51	BQ	MJ	N	E	AC circuit PWB (200V series)		ACカイロキバン200

35 DC電源基板(DC power supply PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
1	0FT3655962B9/	AG	DX	N	C	Heat sink (APH34200-087)		フィン
2	0FT3660621B9/	AV	FQ	N	C	Chassis (APA22000-122)		シャーシ
3	0FT3661644B9/	AM	EG	N	C	Insulator sheet (APG27100-008)		ゼツエンシート
4	0FT3523314B9/	AG	DX	N	C	Heat sheet (AP47100-340-173)		ホウネツシート
5	0FT3339440B9/	AC	DD	N	C	Angle (AP47101-002-01)		S(ハンドウタイ)カナグ
6	0FT3202569B9/	AB	DD	N	C	Spacer (AP47030-169)		スペーサ
7	0FT3423816B9/	AA	DD	N	C	Screw (M3×8 S NP3 W,SW)		ショウワッシャWセムスネジ
8	0FT3455742B9/	AA	DD	N	C	Screw (M3×16 S NP3 W,SW)		ショウワッシャWセムスネジ
9	0FT3432963B9/	AA	DD	N	C	Screw (M3×10 S NP3 W,SW)		ショウワッシャWセムスネジ
10	0FT3043398B9/	AB	DD	N	C	Fuse holder (F-107)(100V series)	[F701]	ヒューズホルダー
⚠ 11	0FT3149129B9/	AE	DS	N	A	Fuse (SB4 AC125V 4A)(100V series)	[F702]	ガラスカンヒューズ
⚠	0FT3212254B9/	AE	DS	N	A	Fuse (ES3-4000 AC250V 4A)(200V series)	[F702]	ガラスカン ヒューズ
⚠ 12	0FT3136590B9/	AE	DS	N	A	Fuse (SB3.15 AC125V 3.15A)(100V series)	[F703~705]	ガラスカンヒューズ
⚠	0FT3106594B9/	AE	DS	N	A	Fuse (ES3-3150 AC250V 3.15A)(200V series)	[F703~705]	ガラスカン ヒューズ
⚠ 13	0FT3426459B9/	AR	EZ	N	A	Fuse (CE36 AC125V 15A N1)(100V series)	[F701]	セラミックカンヒューズ
⚠	0FT3635465B9/	AR	EZ	N	A	Fuse (215 06.3 AC250V 6.3A)(200V series)	[F701]	セラミックカン ヒューズ
14	0FT3555402B9/	AB	DD	N	C	Fuse holder (EYF-52LCZ AC250V 10A)	[F701~705]	ヒューズホルダー
15	0FT3397858B9/	AC	DD	N	C	Connector (B2P3-VH)	[CN701]	コネクタ
16	0FT3654583B9/	AG	DX	N	C	Connector (DF1B-30DP-2.5 DSA)	[CN702]	コネクタ
⚠ 17	0FT3655865B9/	AY	GD	N	C	Transformer (EXT42820-175)(100V series)	[T701]	トランス
⚠	0FT3655873B9/	AZ	GD	N	C	Transformer (EXT42840-146)(200V series)	[T701]	トランス
18	0FT3600157B9/	AP	EQ	N	C	Coil (SC-05-200 CX47010-265)	[L701]	リアクトル
19	0FT3613135B9/	AV	FQ	N	C	Coil (SC-05-800)(200V series)	[L702]	リアクトル
20	0FT3655881B9/	AY	GD	N	C	Coil (EXL42850-065)	[L703]	リアクトル
21	0FT3184390B9/	AE	DS	N	C	Coil (CX40357-004)	[L704~705]	リアクトル
22	0FT3184404B9/	AE	DS	N	C	Coil (CX40357-005)	[L706]	リアクトル
23	0FT3375323B9/	AP	EQ	N	C	Coil (HK-10S100-4500)	[L707]	リアクトル
24	0FT3184412B9/	AE	DS	N	C	Coil (CX40357-006)	[L708~709]	リアクトル
25	0FT3437582B9/	AB	DD	N	C	Core (BL02RN2-R62)	[FB703~711]	フェライトビーズ
26	0FT3518469B9/	AP	EQ	N	B	Diode (RBV-1506)(100V series)	[RC701]	セイリュウキ
	0FT3163598B9/	AQ	EZ	N	B	Diode (RBV-606)(200V series)	[RC701]	セイリュウキ
27	0FT3299783B9/	AQ	EQ	N	B	Diode (FML-34S)	[RC702~703]	セイリュウキ
28	0FT3268373B9/	AH	DX	N	B	Diode (FML-12S)	[RC704]	セイリュウキ
29	0FT3199827B9/	AH	DX	N	B	Diode (FMB-24)	[RC706]	セイリュウキ
30	0FT3272486B9/	AH	DX	N	B	Diode (FMB-24L)	[RC707]	セイリュウキ
31	0FT3322335B9/	AC	DD	N	B	Diode (EG01A)(100V series)	[D701~703]	ダイオード
	0FT3402142B9/	AD	DJ	N	B	Diode (EG01C)(200V series)	[D701~703]	ダイオード
32	0FT3107000B9/	AB	DD	N	B	Diode (1S2076)	[D705]	ダイオード
33	0FT3106993B9/	AB	DD	N	B	Diode (1SS118)	[D706]	ダイオード
34	0FT3601552B9/	AC	DD	N	B	Diode (1GU42)	[D708]	ダイオード
35	0FT3601552B9/	AC	DD	N	B	Diode (1GU42)	[D710]	ダイオード
36	0FT3107000B9/	AB	DD	N	B	Diode (1S2076)	[D711]	ダイオード
37	0FT3606732B9/	AC	DD	N	B	Diode (S5688G)	[D713]	ダイオード
38	0FT3107000B9/	AB	DD	N	B	Diode (1S2076)	[D715]	ダイオード
39	0FT3107000B9/	AB	DD	N	B	Diode (1S2076)	[D717~718]	ダイオード
40	0FT3107000B9/	AB	DD	N	B	Diode (1S2076)	[D720]	ダイオード
41	0FT3586928B9/	AC	DD	N	B	Diode (S5688J)	[D724~727]	ダイオード
42	0FT3606732B9/	AC	DD	N	B	Diode (S5688G)	[D728]	ダイオード
43	0FT3355705B9/	AB	DD	N	B	Zener diode (RD6.8ES-B2)	[D704]	ツェナーダイオード
44	0FT3006263B9/	AB	DD	N	B	Zener diode (RD15E-B1)	[D707]	ツェナーダイオード
45	0FT3355721B9/	AB	DD	N	B	Zener diode (RD30ES-B1)	[D714]	ツェナーダイオード
46	0FT3291235B9/	AB	DD	N	B	Zener diode (RD12ES-B3)	[D716]	ツェナーダイオード
47	0FT3574342B9/	AB	DD	N	B	Zener diode (RD5.1ES-B2)	[D719]	ツェナーダイオード
48	0FT3574342B9/	AB	DD	N	B	Zener diode (RD5.1ES-B2)	[D721]	ツェナーダイオード
49	0FT3007529B9/	AB	DD	N	B	Zener diode (RD3.9E-B2)	[D723]	ツェナーダイオード
50	0FT3355705B9/	AB	DD	N	B	Zener diode (RD6.8ES-B2)	[D730]	ツェナーダイオード
51	0FT3286746B9/	AG	DX	N	B	Varister (KP2W2140K(OIZ))(100V series)	[NR701~702]	バリスタ
	0FT3313638B9/	AH	DX	N	B	Varister (KP2W2300K)(200V series)	[NR701~702]	バリスタ
52	0FT3405087B9/	AG	DX	N	B	Transistor (2SC3852A)	[Q704]	トランジスタ
53	0FT3080986B9/	AB	DD	N	B	Transistor (2SC1815-Y : GR)	[Q705~706]	トランジスタ
54	0FT3312208B9/	AM	EG	N	B	Transistor (2SA1568)	[Q707]	トランジスタ
55	0FT3554147B9/	AX	FX	N	B	Transistor (2SK1531)(100V series)	[Q701~702]	デンカイコウカ トランジスタ
	0FT3362604B9/	AZ	GD	N	B	Transistor (2SK1120)(200V series)	[Q701~702]	デンカイコウカ トランジスタ
56	0FT3340848B9/	AK	EB	N	B	Triac (TM1641S-L)(100V series)	[CR701]	トライアック
	0FT3340872B9/	AM	EG	N	B	Triac (TM1061S-L)(200V series)	[CR701]	トライアック
57	0FT3355128B9/	AE	DJ	N	B	Photo coupler (PS2501-1)(100V series)	[PC701~703]	ホトカプラ
	0FT3460010B9/	AH	DX	N	B	Photo coupler (PS2652 CTR=K VDE)(200V series)	[PC701~703]	オートカプラ
58	0FT3639789B9/	AQ	EQ	N	B	IC (FA5310P)	[Z701]	シュウセキカイロ
59	0FT3405095B9/	AQ	EQ	N	B	IC (SI-3102V)	[Z702]	シュウセキカイロ
60	0FT3006212B9/	AM	EG	N	B	IC (MB3759M)	[Z703]	シュウセキカイロ
61	0FT3079589B9/	AQ	EQ	N	B	IC (SI-3052V)	[Z704]	シュウセキカイロ
62	0FT3644537B9/	AE	DJ	N	B	Variable resistor (KVSF687AB500 OHM)	[RV701]	カヘンテイコウキ
63	0FT3629570B9/	AE	DJ	N	B	Variable resistor (KVSF687AB2K OHM)	[RV702~703]	カヘンテイコウキ
64	0FT3127710B9/	AG	DX	N	B	Cement resistor (A53K-6R8J 5W OHMJ)(100V series)	[R706~707]	セメントテイコウキ
	0FT3145182B9/	AH	DX	N	B	Cement resistor (A53K-220J 5W 22 OHMJ)(200V series)	[R706]	セメントテイコウキ
65	0FT3045374B9/	AE	DS	N	B	Cement resistor (M0-4D 5W 68 OHMJ)	[R768~769]	セメントテイコウキ
66	0FT3563464B9/	AB	DD	N	C	Metal oxide film resistor (RSMF 2SL 15K OHMJ)(100V series)	[R702~703]	サンカキンゾクヒマクテイコウキ
	0FT3563480B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2SL 33K OHMJ)(200V series)	[R702~703]	サンカキンゾクヒマクテイコウキ

35 DC電源基板(DC power supply PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
67	0FT3563251B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2SL 10 OHMJ)	[R709~710]	サンカキンゾクヒマクテイコウキ
68	0FT3563324B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2SL 100 OHMJ)	[R711~712]	サンカキンゾクヒマクテイコウキ
69	0FT3184161B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2B 0.33 OHMJ)(100V series)	[R713~715]	サンカキンゾクヒマクテイコウキ
	0FT3133834B9/	AB	DD	N	C	Metal oxide film resistor (RSF2B 0.68 OHMJ)(200V series)	[R713~715]	サンカキンゾクヒマクテイコウキ
70	0FT3562433B9/	AB	DD	N	C	Metal oxide film resistor (RSMF1/2SL 10 OHMJ)	[R716~718]	サンカキンゾクヒマクテイコウキ
71	0FT3562468B9/	AB	DD	N	C	Metal oxide film resistor (RSMF1/2SL 22 OHMJ)	[R721]	サンカキンゾクヒマクテイコウキ
72	0FT3562557B9/	AB	DD	N	C	Metal oxide film resistor (RSMF1/2SL 470 OHMJ)	[R722]	サンカキンゾクヒマクテイコウキ
73	0FT3563286B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2SL 22 OHMJ)	[R731]	サンカキンゾクヒマクテイコウキ
74	0FT3563286B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2SL 22 OHMJ)	[R733]	サンカキンゾクヒマクテイコウキ
75	0FT3563316B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2SL 68 OHMJ)	[R750~751]	サンカキンゾクヒマクテイコウキ
76	0FT3563219B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2SL 2.2 OHMJ)	[R766]	サンカキンゾクヒマクテイコウキ
77	0FT3563227B9/	AB	DD	N	C	Metal oxide film resistor (RSMF2SL 3.3 OHMJ)	[R767]	サンカキンゾクヒマクテイコウキ
78	0FT3419274B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 100 OHMJ)	[RX701]	カーボンテイコウキ
79	0FT3419363B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 560 OHMJ)	[RX702]	カーボンテイコウキ
80	0FT3419495B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 4.7K OHMJ)	[RX704]	カーボンテイコウキ
81	0FT3419401B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 1K OHMJ)	[RX705]	カーボンテイコウキ
82	0FT3419541B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 10K OHMJ)	[RX706]	カーボンテイコウキ
83	0FT3419371B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 680 OHMJ)	[RX707]	カーボンテイコウキ
84	0FT3419525B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 6.8K OHMJ)	[RX708]	カーボンテイコウキ
85	0FT3419487B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 3.9K OHMJ)	[RX709]	カーボンテイコウキ
86	0FT3419789B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 470K OHMJ)	[R701]	カーボンテイコウキ
87	0FT3418766B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 47K OHMJ)(100V series)	[R705]	カーボンテイコウキ
	0FT3418715B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 22K OHMJ)(200V series)	[R705]	カーボンテイコウキ
88	0FT3418510B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 1K OHMJ)	[R708]	カーボンテイコウキ
89	0FT3418510B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 1K OHMJ)	[R719~720]	カーボンテイコウキ
90	0FT3419681B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 100K OHMJ)(100V series)	[R724~725]	カーボンテイコウキ
	0FT3419746B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 220K OHMJ)(200V series)	[R724~725]	カーボンテイコウキ
91	0FT3418715B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 22K OHMJ)	[R726]	カーボンテイコウキ
92	0FT3419541B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 10K OHMJ)	[R727]	カーボンテイコウキ
93	0FT3418618B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 4.7K OHMJ)	[R728]	カーボンテイコウキ
94	0FT3418766B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 47K OHMJ)	[R729]	カーボンテイコウキ
95	0FT3418561B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 2.7K OHMJ)	[R734~735]	カーボンテイコウキ
96	0FT3418510B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 1K OHMJ)	[R736]	カーボンテイコウキ
97	0FT3418561B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 2.7K OHMJ)	[R737]	カーボンテイコウキ
98	0FT3418804B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 100K OHMJ)	[R738]	カーボンテイコウキ
99	0FT3418618B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 4.7K OHMJ)	[R739]	カーボンテイコウキ
100	0FT3418510B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 1K OHMJ)	[R740]	カーボンテイコウキ
101	0FT3418383B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 100 OHMJ)	[R741]	カーボンテイコウキ
102	0FT3418340B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 47 OHMJ)	[R742]	カーボンテイコウキ
103	0FT3418510B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 1K OHMJ)	[R743]	カーボンテイコウキ
104	0FT3418715B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 22K OHMJ)	[R744~746]	カーボンテイコウキ
105	0FT3418618B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 4.7K OHMJ)	[R747]	カーボンテイコウキ
106	0FT3239829B9/	AB	DD	N	C	Carbon film resistor (RS25S 2.2 OHMJ)	[R748]	カーボンテイコウキ
107	0FT3418340B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 47 OHMJ)	[R749]	カーボンテイコウキ
108	0FT3418642B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 6.8K OHMJ)	[R752]	カーボンテイコウキ
109	0FT3418715B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 22K OHMJ)	[R755]	カーボンテイコウキ
110	0FT3418804B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 100K OHMJ)	[R756]	カーボンテイコウキ
111	0FT3418537B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 1.5K OHMJ)	[R757]	カーボンテイコウキ
112	0FT3419401B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 1K OHMJ)	[R758~760]	カーボンテイコウキ
113	0FT3418553B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 2.2K OHMJ)	[R761~762]	カーボンテイコウキ
114	0FT3419452B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 2.2K OHMJ)	[R763]	カーボンテイコウキ
115	0FT3418510B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 1K OHMJ)	[R764]	カーボンテイコウキ
116	0FT3419495B9/	AA	DD	N	C	Carbon film resistor (RDF14-FB 4.7K OHMJ)	[R765]	カーボンテイコウキ
117	0FT3418715B9/	AA	DD	N	C	Carbon film resistor (RDMF14-FX 22K OHMJ)	[R770]	カーボンテイコウキ
118	0FT3611582B9/	AY	GD	N	C	Aluminum electrolytic capacitor (KLM200VNSN1200M30FDIA30/50L)(100V series)	[C713~715]	デンカイコンデンサ
	0FT3611957B9/	BA	GJ	N	C	Aluminum electrolytic capacitor (KLM400VNSN390M30F DIA30X50L)(200V series)	[C713~715]	デンカイコンデンサ
119	0FT3463206B9/	AD	DJ	N	C	Aluminum electrolytic capacitor (KMF63VB-100)	[C720]	デンカイコンデンサ
120	0FT3463192B9/	AD	DJ	N	C	Aluminum electrolytic capacitor (KMF63VB-47FC)	[C722]	デンカイコンデンサ
121	0FT3463109B9/	AH	DX	N	C	Aluminum electrolytic capacitor (KMF35VB-2200)	[C734~736]	デンカイコンデンサ
122	0FT3463044B9/	AH	DX	N	C	Aluminum electrolytic capacitor (KMF25VB-2200)	[C737~738]	デンカイコンデンサ
123	0FT3463052B9/	AC	DD	N	C	Aluminum electrolytic capacitor (KMF35VB-47FC)	[C739]	デンカイコンデンサ
124	0FT3463095B9/	AF	DS	N	C	Aluminum electrolytic capacitor (KMF35VB-1000)	[C740]	デンカイコンデンサ
125	0FT3581160B9/	AM	EG	N	C	Aluminum electrolytic capacitor (KMF35VB-3300)	[C746]	デンカイコンデンサ
126	0FT3463036B9/	AE	DS	N	C	Aluminum electrolytic capacitor (KMF25VB-1000)	[C747]	デンカイコンデンサ
127	0FT3436125B9/	AC	DD	N	C	Aluminum electrolytic capacitor (KMF50VB-1FC)(100V series)	[C752]	デンカイコンデンサ
	0FT3463125B9/	AC	DD	N	C	Aluminum electrolytic capacitor (KMF50VB-1FC)(200V series)	[C752]	デンカイコンデンサ
128	0FT3463036B9/	AE	DS	N	C	Aluminum electrolytic capacitor (KMF25VB-1000)	[C753]	デンカイコンデンサ
129	0FT3463087B9/	AD	DJ	N	C	Aluminum electrolytic capacitor (KMF35VB-470)	[C755]	デンカイコンデンサ
130	0FT3463052B9/	AC	DD	N	C	Aluminum electrolytic capacitor (KMF35VB-47FC)	[C756]	デンカイコンデンサ
131	0FT3095525B9/	AB	DD	N	C	Film capacitor (AMZF-102K50)	[CX701]	フィルムコンデンサ
132	0FT3090531B9/	AC	DD	N	C	Film capacitor (AMZF-104K50)	[CX702]	フィルムコンデンサ
133	0FT3095525B9/	AB	DD	N	C	Film capacitor (AMZF-102K50)	[CX703]	フィルムコンデンサ

35 DC電源基板(DC power supply PWB)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
134	0FT3090531B9/	AC	DD	N	C	Film capacitor (AMZF-104K50)	[CX704]	フィルムコンデンサ
135	0FT3099229B9/	AC	DJ	N	C	Film capacitor (AMZF-224K50)	[CX705]	フィルムコンデンサ
136	0FT3090523B9/	AB	DD	N	C	Film capacitor (AMZF-473K50)	[CX706]	フィルムコンデンサ
137	0FT3641961B9/	AH	DX	N	C	Film capacitor (ECQ-U2A224MX)(100V series)	[C701]	フィルムコンデンサ
	0FT3606155B9/	AN	EQ	N	C	Film capacitor (ECQ-U2A474MX)(200V series)	[C701]	フィルムコンデンサ
138	0FT3606163B9/	AG	DX	N	C	Film capacitor (ECQ-U2A104MX)(100V series)	[C704]	フィルムコンデンサ
	0FT3641961B9/	AH	DX	N	C	Film capacitor (ECQ-U2A224MX)(200V series)	[C704]	フィルムコンデンサ
139	0FT3611361B9/	AD	DJ	N	C	Film capacitor (MMC-223K630)	[C716]	フィルムコンデンサ
140	0FT3090280B9/	AB	DD	N	C	Film capacitor (AMZF-103K50)	[C741]	フィルムコンデンサ
141	0FT3090531B9/	AC	DD	N	C	Film capacitor (AMZF-104K50)	[C748]	フィルムコンデンサ
142	0FT3087743B9/	AB	DD	N	C	Film capacitor (AMZF-472K50)	[C749]	フィルムコンデンサ
143	0FT3090280B9/	AB	DD	N	C	Film capacitor (AMZF-103K50)	[C751]	フィルムコンデンサ
144	0FT3069737B9/	AC	DJ	N	C	Ceramic capacitor (DE7100F222MVA1-KC)(100V series)	[C702~703]	セラミックコンデンサ
	0FT3163008B9/	AE	DS	N	C	Ceramic capacitor (ECK-DNS222MEX)(200V series)	[C702~703]	セラミックコンデンサ
145	0FT3426106B9/	AC	DJ	N	C	Ceramic capacitor (DE7120F332MVA1-KC)(100V series)	[C710]	セラミックコンデンサ
	0FT3426106B9/	AC	DJ	N	C	Ceramic capacitor (DE7120F332MVA1-KC)(100V series)	[C712]	セラミックコンデンサ
	0FT3062252B9/	AE	DS	N	C	Ceramic capacitor (DE7150F472MVA1-KC)(200V series)	[C709~712]	セラミックコンデンサ
146	0FT3347680B9/	AC	DJ	N	C	Ceramic capacitor (DE5095-SL221J1K)(100V series)	[C718~719]	セラミックコンデンサ
	0FT3530043B9/	AD	DJ	N	C	Ceramic capacitor (DE5085-742SL101J2K)(200V series)	[C718~719]	セラミックコンデンサ
147	0FT3515109B9/	AC	DJ	N	C	Ceramic capacitor (DE0705-742R471K)	[C721]	セラミックコンデンサ
148	0FT3010406B9/	AC	DJ	N	C	Ceramic capacitor (DE0907R102K1KV)	[C728~729]	セラミックコンデンサ
149	0FT3010406B9/	AC	DJ	N	C	Ceramic capacitor (DE0907R102K1KV)	[C732~733]	セラミックコンデンサ
150	0FT3010279B9/	AC	DJ	N	C	Ceramic capacitor (DD104SL-470J50V)	[C742]	セラミックコンデンサ
151	0FT3661636B9/	AV	FQ	N	C	Heat sink (APH44000-038)		フィン
152	0FT3655954B9/	AV	FQ	N	C	Heat sink (APH44200-064)		フィン
153	0FT3429148B9/	AC	DD	N	C	Heat sink (APH47090-440)		ホウネツシート
154	0FT3596176B9/	AN	EQ	N	C	Heat sink (APH44000-001)		ホウネツキ
155	0FT3138496B9/	AG	DX	N	C	Heat sink (OSH-3030-MP)		ホウネツキ
156	0FT3120260B9/	AB	DD	N	C	Terminal angle (AP47039-572-01)		ターミナルカナグ
157	0FT3649989B9/	AD	DJ	N	C	Heat sink (APH46400-012-4)		フィン
158	0FT3370860B9/	AB	DD	N	C	Spacer (AP47120-002)		スペーサ
159	0FT3423816B9/	AA	DD	N	C	Screw (M3×8 S NP3 W SW)		ショウワッシャWセムスネジ
160	0FT3432963B9/	AA	DD	N	C	Screw (M3×10 S NP3 W SW)		ショウワッシャWセムスネジ
161	0FT3453561B9/	AA	DD	N	C	Screw (M3×8 S NP3)		Bタイトネジ
162	0FT3090280B9/	AB	DD	N	C	Film capacitor (AMZF-103K50)	[C717]	フィルムコンデンサ
163	0FT3090531B9/	AC	DD	N	C	Film capacitor (AMZF-104K50)	[C723]	フィルムコンデンサ
164	0FT3334325B9/	AB	DD	N	C	Film capacitor (AMZF-471K50)	[C725]	フィルムコンデンサ
	ユニット (Unit)							
⚠ 901	CPWBF0939FC31	CD	UF	N	E	DC power supply PWB (100V series)		DCデンゲンキバン
⚠	CPWBF0944FC31	CE	UK	N	E	DC power supply PWB (200V series)		DCデンゲンキバン

36 梱包材 & 付属品(Packing material & Accessories)

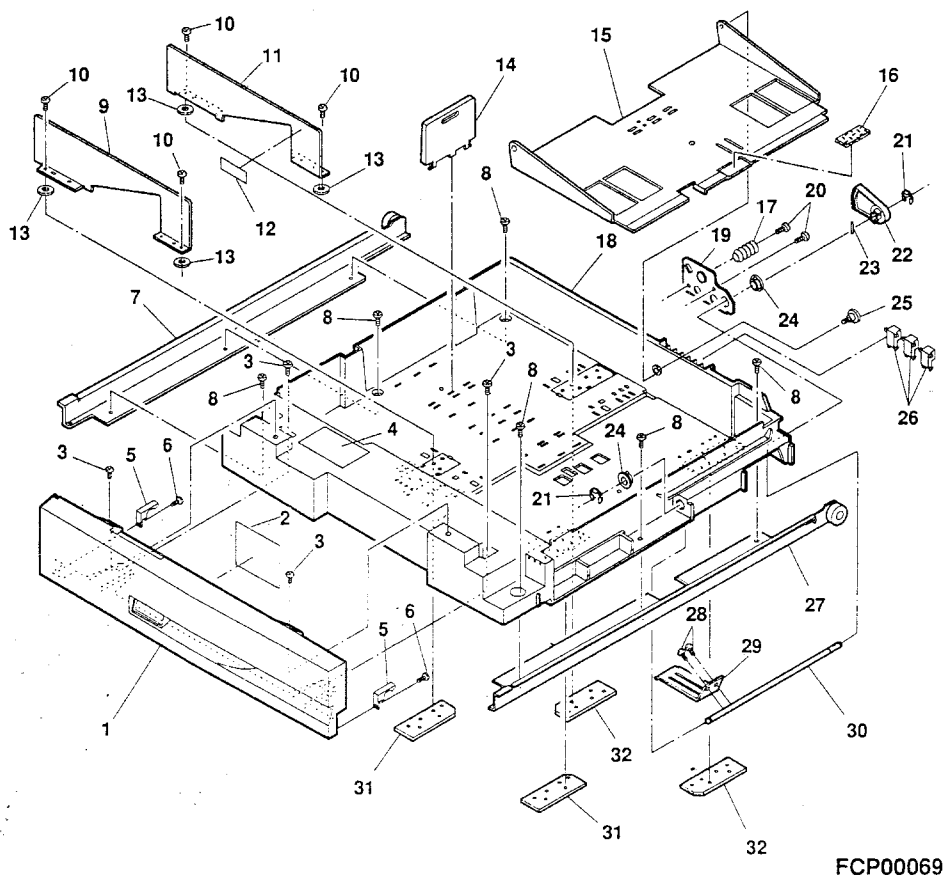
NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	CCASZ0067FC02	AM	EG		D	Maintenance case (Japan only)	メンテナンスケース
	CCASZ0067FC01	AD	DJ		D	Maintenance case (Export)	メンテナンスケース
2	CPAKA4691FC01	AZ	GD	N	D	Bottom case	ソコケース
3	CSOU-0103FC01	AW	FQ	N	D	Delivery tray (Japan only)	ハイシトレイAB
	LSOU-0090FCZZ	AT	FG		D	Delivery tray (Export)	ハイシトレイ
4	CYOK-0039FC01	AQ	EQ	N	D	Waste toner bottle	ハイトナーボトル
5	GCOVZ0196FCZZ	AV	FQ		D	Dust cover(Japan,Bahrain,Kuwait,Saudi Arabia,Oman,Katar, North Yemen,Egypt,Jordan,Syria,U.A.E.Tunisia,Morocco)	ダストカバー B9
6	LDAiU0325FCOZ	AN	EQ		D	Original table (USA,CANADA,Australia,SEEG,U,Kingdom)	ゲンコウオキダイ
7	LX-BZ0426FCZZ	AA	DD		C	Screw (M4)(Blue)	ビス
8	LX-BZ0649FCZZ	AB	DD	N	C	Screw	ビス
9	LX-BZ0650FCZZ	AB	DD	N	C	Screw	ビス
10	LX-BZ0651FCZZ	AB	DD	N	C	Screw	ビス
11	PCOVP1151FCZZ	AK	EB	N	C	Module cover (Export)	モジュラーカバー
12	PSHEZ3153FCZZ	AD	DJ	N	D	Sheet,Accessories	フゾクヒンシート
13	PSHEZ3226FCZZ	AE	DS	N	C	Operation protect sheet	ソウササブホゴシート
14	PPiP-0162FCZZ	AK	EB	N	C	Pipe A (USA,CANADA,Australia,SEEG,U,Kingdom)	シチュウ A
	PPiP-0165FCZZ	AL	EB	N	C	Pipe B (Other countries)	シチュウ B
15	SPAKA4693FCZZ	AE	DS	N	D	OC protect packing cushion (Except USA,CANADA,Australia, SEEG,U,Kingdom)	OCホゴザイ
16	SPAKA4706FCZZ	AT	FG	N	C	Top packing cushion A L (USA,CANADA,Australia,SEEG,U,Kingdom)	テンパットA L
	SPAKA4708FCZZ	AT	FG	N	D	Top packing cushion B L (Other countrirs)	テンパットB L
17	SPAKA4707FCZZ	AT	FG	N	C	Top packing cushion A R (USA,CANADA,Australia,SEEG,U,Kingdom)	テンパットA R
	SPAKA4709FCZZ	AT	FG	N	D	Top packing cushion B R (Other countries)	テンパットB R
18	SPAKA4711FCZZ	AG	DS	N	D	Spacer,Accessories	フゾクスペーサーJ
19	SPAKC4684FCZZ	BA	GJ	N	D	Packing case (Japan only) (SF-2022)	パッキングケース
	SPAKC4735FCZZ	BA	GJ	N	D	Packing case (Japan only) (SF-2022H)	パッキングケース
	SPAKC4768FC11	BA	GJ	N	D	Packing case (Germany only) (SF-2022)	パッキングケース
	SPAKC4768FCZZ	BA	GJ	N	D	Packing case (SEEG only) (SF-2022)	パッキングケース

36 梱包材 & 付属品(Packing material & Accessories)

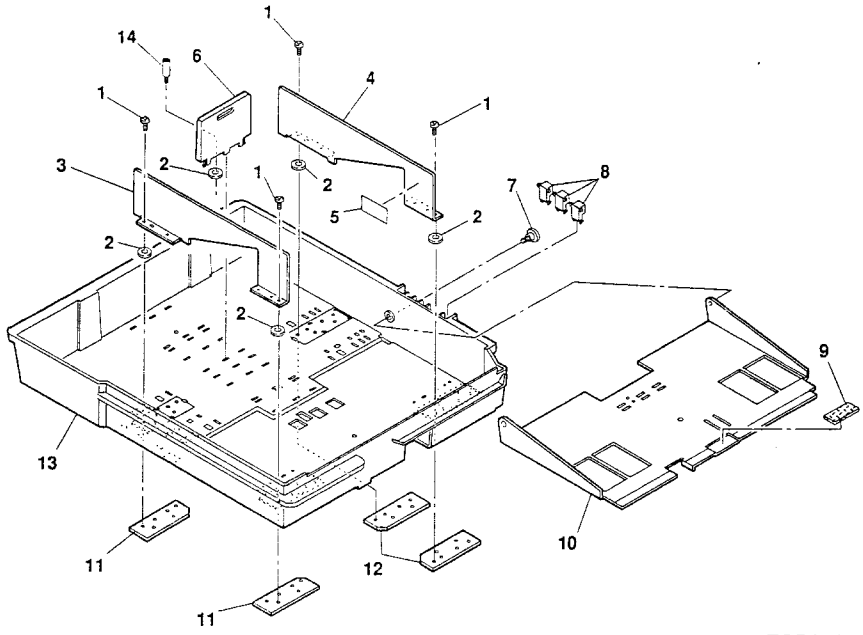
NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
19	SPAKC4688FCZZ	AZ	GD	N	D	Packing case (USA,CANADA,Australia,U,K ingdom)	(SF-2022)	パッキングケース
	SPAKC4690FCZZ	BA	GJ	N	D	Packing case (Indonesia only)	(SF-2022S)	パッキングケース
	SPAKC4689FCZZ	BA	GJ	N	D	Packing case (other countries)	(SF-2022)	パッキングケース
	SPAKC4728FCZZ	BA	GJ	N	D	Packing case (Japan only)	(SF-2027)	パッキングケース
	SPAKC4736FCZZ	BA	GJ	N	D	Packing case (Japan only)	(SF-2027H)	パッキングケース
	SPAKC4769FC11	BA	GJ	N	D	Packing case (Germany only)	(SF-2027)	パッキングケース
	SPAKC4769FCZZ	BA	GJ	N	D	Packing case (SEEG only)	(SF-2027)	パッキングケース
	SPAKC4729FCZZ	AZ	GD	N	D	Packing case (USA,CANADA,Australia,U,K ingdom)	(SF-2027)	パッキングケース
	SPAKC4731FCZZ	BA	GJ	N	D	Packing case (Indonesia only)	(SF-2027S)	パッキングケース
	SPAKC4730FCZZ	BA	GJ	N	D	Packing case (other countries)	(SF-2027)	パッキングケース
20	SSAKA3441QCZZ	AB	DD	N	D	Vinyl bag for Accessories (320×470㎜)(SEEG only)		フゾクヒンヨウポリブクロ
	SSAKA2440QCZZ	AB	DD		D	Vinyl bag for Accessories (280×410㎜)(Other countries)		フゾクヒンヨウポリブクロ
21	TCADZ0923FCZZ	AA	DD		D	4th,5th mirror screw caution card F		4,5ミラーコテイビスチュウイカードF
22	TCADZ0924FCZZ	AA	DD		D	4th,5th mirror screw caution card R		4,5ミラーコテイビスチュウイカードR
23	TCADS0497FCZZ	AH	DX		D	Card (Japan only)		ノウニュウセッチホウコクショ
	TCADS0649FCZZ	AM	EG		D	Card (SEEG only)		ノウニュウセッチホウコクショ
	TCADS0764FCZZ	AE	DJ		D	Card (U,Kingdom only)		ワランティーレジストカード
24	TCADZ0772FCZZ	AE	DJ		D	Card (Japan only)		サービスケイヤクショ
25	TCADZ0965FCZZ	AG	DS	N	D	Installation manual card (Japan only)		セッチテジュンショJ
	TCADZ2001QCZZ	AE	DJ		D	Installation manual card (Australia only)		セッチテジュンショJ
26	TLABH2646FCZZ	AB	DD		C	Label		ビスカイコンラベル
27	TLABH2967FCZ1	AC	DD		C	Label		カイコンセツメイラベルN
28	TLABZ0248FCZZ	AB	DD		C	Screw caution label (Japan only)		コテイネジレリーズラベル
	TLABZ0241FCZZ	AB	DD		C	Screw caution label (Export)		コテイネジレリースE
29	TLABH3230FCZZ	AE	DS	N	C	Magnification rafio select label (Inch series)	(SF-2022)	バイリツセンタクラベル
	TLABH3229FCZZ	AE	DS	N	C	Magnification rafio select label (AB series)	(SF-2022)	バイリツセンタクラベル
30	TiNSJ0998FCZZ	AU	FQ	N	D	Operation manual (Japanese)		トリアツカイセツメイショ(ワブン)
	TiNSE0999FCZZ	AQ	EZ	N	D	Operation manual (USA)	(SF-2022)	トリアツカイセツメイショ
	TiNSE1006FCZZ	BB	GJ	N	D	Operation manual (U,Kingdom)	(SF-2022)	トリアツカイセツメイショ
	TiNSE1000FCZZ	AU	FQ	N	D	Operation manual (English)	(SF-2022)	トリアツカイセツメイショ(エイゴ)
	TiNSF1002FCZZ	AW	FX	N	D	Operation manual (French)	(SF-2022)	トリアツカイセツメイショ(フランスゴ)
	TiNSG1001FCZZ	AV	FQ	N	D	Operation manual (German)	(SF-2022)	トリアツカイセツメイショ(ドイツゴ)
	TiNSi1004FCZZ	AX	FX	N	D	Operation manual (Italian)	(SF-2022)	トリアツカイセツメイショ(イタリアゴ)
	TiNSS1003FCZZ	AZ	GJ	N	D	Operation manual (Spanish)	(SF-2022)	トリアツカイセツメイショ(スペインゴ)
	TiNSZ1005FCZZ	AZ	GJ	N	D	Operation manual (Arabic)	(SF-2022)	トリアツカイセツメイショ(アラビアゴ)
	TiNSE1007FCZZ	BB	GJ	N	D	Operation manual (Indonesian)	(SF-2022S)	トリアツカイセツメイショ(インドネシアゴ)
	TiNSH1041FCZZ	AW	FQ	N	D	Operation manual (Dutch)	(SF-2022)	トリアツカイセツメイショ
	TiNSE1020FCZZ	AQ	EZ	N	D	Operation manual (USA)	(SF-2027)	トリアツカイセツメイショ
	TiNSE1027FCZZ	BB	GJ	N	D	Operation manual (U,Kingdom)	(SF-2027)	トリアツカイセツメイショ
	TiNSE1021FCZZ	AU	FQ	N	D	Operation manual (English)	(SF-2027)	トリアツカイセツメイショ(エイゴ)
	TiNSF1023FCZZ	AW	FQ	N	D	Operation manual (French)	(SF-2027)	トリアツカイセツメイショ(フランスゴ)
	TiNSG1022FCZZ	AX	FX	N	D	Operation manual (German)	(SF-2027)	トリアツカイセツメイショ
	TiNSi1025FCZZ	AX	FX	N	D	Operation manual (Italian)	(SF-2027)	トリアツカイセツメイショ
	TiNSS1024FCZZ	AZ	GJ	N	D	Operation manual (Spanish)	(SF-2027)	トリアツカイセツメイショ(スペインゴ)
	TiNSZ1026FCZZ	AZ	GJ	N	D	Operation manual (Arabic)	(SF-2027)	トリアツカイセツメイショ(アラビアゴ)
	TiNSE1028FCZZ	AU	FQ	N	D	Operation manual (Indonesian)	(SF-2027S)	トリアツカイセツメイショ(インドネシアゴ)
	TiNSH1042FCZZ	AW	FQ	N	D	Operation manual (Dutch)	(SF-2027)	トリアツカイセツメイショ
31	XEBSD40P12000	AA	DD		C	Screw (4×12)		ビス

39 SF-CM11‥カセット一体ドロアーユニット(SF-CM11‥Cassette assembly drawer unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	JHNDP0107FCZZ	AW	FQ	N	C	Cassette handle	カセットトッテ
	LPLTP4070FCZZ	AM	EG	N	C	Size display plate (Japan only)	サイズヒョウジバンJ
2	LPLTP4070FCZ2	AK	EB	N	C	Size display plate (Inch series)	サイズヒョウジバンIN
	LPLTP4070FCZ1	AK	EB	N	C	Size display plate (Export‥AB series)	サイズヒョウジバンAB
3	XBTSC40P08000	AA	DD		C	Screw (4×8)	ビス
4	TLABZ3105FCZZ	AD	DJ	N	C	Cassette instruction label	カセットセツメイラベル
5	PTME-0223FCZZ	AD	DJ	N	C	Cassette lock pawl	カセットロックツメ
6	XEPSD40P10000	AA	DD		C	Screw (4×10)	ビス
7	CRALM0111FC01	AQ	EZ	N	C	Cassette rail L	カセットレールL(ショウ)
8	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
9	LPLTM4039FCZZ	AL	EB	N	C	Side plate F	ソクバンF
10	XBPSD40P08000	AA	DD		C	Screw (4×8)	ビス
11	CPLTM4040FC01	AP	EQ	N	C	Side plate R	ソクバンR
12	TLABZ3020FCZZ	AC	DD		C	Label	シジセンラベルN1
13	LX-WZ0317FCZZ	AA	DD	N	C	Washer	ワッシャ
14	LPLTP4023FCZZ	AD	DJ	N	C	Rear plate	コウタンバン
15	LPLTM4041FCZZ	AT	FQ	N	C	Rotation plate	カイテンバン
16	PSHEZ3130FCZZ	AB	DD	N	C	Rotation sheet	カイテンイタシートクラリーノ
17	QEARB0056FCZZ	AA	DD	N	C	500 cassette earth spring	500カセアーススプリング
18	GCASP0156FCZZ	BB	GN	N	D	Cassette drawer case	カセットイッタイドロアケース
19	LPLTM4044FCZZ	AF	DS	N	C	Drawer base plate	ドロアベースバン
20	XEBSD40P10000	AA	DD		C	Screw (4×10)	ビス
21	XRESP60-08000	AA	DD		C	E type ring	Eリング
22	NGERH0859FCZZ	AD	DJ	N	C	Gear	センケイギヤ
23	LPINS0157FCZZ	AB	DD		C	Pin (φ3L14)	ヘイコウピン
24	NBRGC0167FCZZ	AB	DD		C	PF bearing	PFジクウケ
25	LX-BZ0138FCZZ	AB	DD		C	Screw	ダンビス
26	LDAIU0449FCZZ	AC	DJ	N	C	Size detect block	サイズケンチブロック
27	CRALM0110FC01	AQ	EZ	N	C	Cassette rail R	カセットレールR(ショウ)
28	XBBSD30P08000	AA	DD		C	Screw (3×8)	ビス
29	LPLTM4043FCZZ	AF	DS	N	C	Lift plate	リフトプレート
30	NSFTZ1760FCZZ	AM	EG	N	C	Lift shaft	リフトシャフト B9
31	LPLTM4042FCZZ	AF	DS	N	C	Side plate fixing plate	ソクバンコテイバン
32	LPLTM4042FCZ1	AG	DX	N	C	Side plate fixing plate R	ソクバンコテイバン R
	ユニット (Unit)						
901	CCASP0156FC31	BR	MW	N	E	B5 Cassette assembly drawer case unit (Japan only)	B5カセットドロアケースユニット
	CCASP0156FC37	BR	MW	N	E	RG Cassette assembly drawer case unit (Inch series)	RGカセットドロアケースユニット
	CCASP0156FC38	BR	MW	N	E	A4 Cassette assembly drawer case unit (Export‥AB series)	A4カセットドロアケースユニット



37 SF-IC11‥インナーカセット(SF-IC11‥ Inner cassette)



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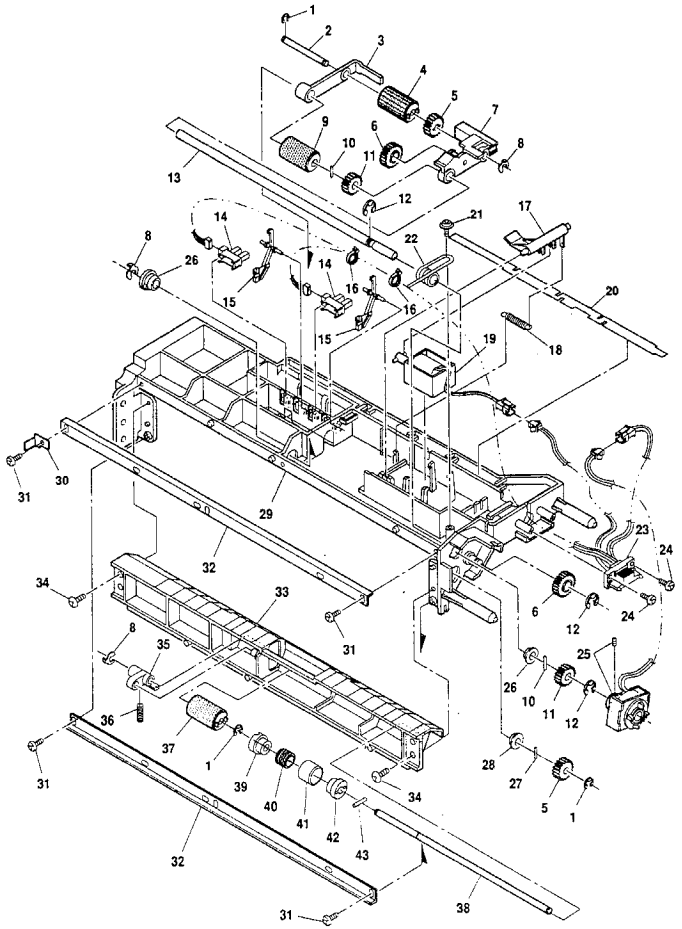
37 SF-IC11‥インナーカセット(SF-IC11‥ Inner cassette)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XBPSD40P08000	AA	DD		C	Screw (4×8)	ビス
2	LX-WZ0317FCZZ	AA	DD	N	C	Washer	ワッシャ
3	LPLTM4039FCZZ	AL	EB	N	C	Side plate F	ソクバンF B9-C
4	CPLTM4040FC01	AP	EQ	N	C	Side plate R	ソクバンR B9-C
5	TLABZ3090FCZZ	AB	DD	N	C	Indication label	シジセンラベルB9
6	LPLTP4023FCZZ	AD	DJ	N	C	Rear plate	コウタンバン
7	LX-BZ0138FCZZ	AB	DD		C	Screw	ダンビス
8	LDAiU0449FCZZ	AC	DJ	N	C	Size detect block	サイズケンチブロック
9	PSHEZ3130FCZZ	AB	DD	N	C	Rotation plate sheet	カイテンイタシートクラリーノ
10	LPLTM4041FCZZ	AT	FQ	N	C	Rotation plate	カイテンバンB9-C
11	LPLTM4042FCZZ	AF	DS	N	C	Side plate fixing plate	ソクバンコテイバン
12	LPLTM4042FCZ1	AG	DX	N	C	Side plate fixing plate R	ソクバンコテイバン R
13	GCASP0154FCZZ	AY	GD	N	D	Inner cassette case	インナーカセットケース
14	LX-BZ0108FCZZ	AC	DD		C	Screw	ビス
501	CCASP0154FC33	BF	HG	N	E	A3 inner cassette unit (AB series)	A3インナーカセットユニット
	CCASP0154FC34	BF	HG	N	E	W-LT inner cassette unit (Inch series)	Wレターインナーカセットユニット

38 SF-IC11‥梱包材&付属品(SF-IC11‥Packing material & Accessories)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PFTA-0090FCZZ	AU	FQ	N	D	Inner cassette cover	インナーカセットフタ
2	SPAKA4725FCZZ	AD	DJ	N	D	Inner cassette packing cushion	インナーカセットアド
3	SPAKA4794FCZZ	AD	DJ	N	D	Cassette protect packing cushion	カセットホゴザイ
4	SPAKC4723FCZZ	AR	EZ	N	D	Packing case (Japan only)	パッキングケース
	SPAKC4723FC11	AR	EZ	N	D	Packing case (Export)	パッキングケース
5	SSAKA2440QCZZ	AB	DD		D	Vinyl bag for accessories (280×410mm)	ポリブクロ
6	SSAKH0021SCZZ	AC	DD		D	Vinyl bag for cassette (590×640mm)	ポリブクロ
7	TCADZ0986FCZZ	AT	FG	N	D	Card (Japan only)	IC11セッチテジュンショ
	TCADZ0987FCZZ	AT	FG	N	D	Card (USA,Australia,U,Kingdom)	IC11セッチテジュンショU
	TCADZ0988FCZZ	AT	FG	N	D	Card (Other countries)	IC11セッチテジュンショE4
8	TLABZ1610FCOZ	AB	DD	N	C	A3 cassette size label (AB series)	カセサイズA3
	TLABZ1611FCOZ	AB	DD	N	C	B4 cassette size label (AB series)	カセサイズB4
	TLABZ1612FCOZ	AA	DD		C	A4R cassette size label (AB series)	A4カセットサイズラベル
	TLABZ1613FCOZ	AA	DD		C	B5R cassette size label (AB series)	B5Rカセットサイズラベル
	TLABZ1617FCOZ	AA	DD		C	A4 cassette size label (AB series)	A4カセットサイズラベル
	TLABZ1618FCOZ	AA	DD		C	B5 cassette size label (AB series)	B5カセットサイズラベル
	TLABZ1679FCOZ	AB	DD	N	C	A5 cassette size label (AB series)	A5カセットサイズラベル
	TLABZ1614FCOZ	AB	DD	N	C	LT-R cassette size label (Inch series)	レターRカセットサイズラベル
	TLABZ1615FCOZ	AB	DD	N	C	RG cassette size label (Inch series)	リーガルカセットサイズラベル
	TLABZ1616FCOZ	AB	DD	N	C	W-LT cassette size label (Inch series)	Wレターカセットサイズラベル
	TLABZ1619FCOZ	AB	DD	N	C	LT cassette size label (Inch series)	レターカセットサイズラベル
	TLABZ1680FCOZ	AB	DD	N	C	Invoice cassette size label (Inch series)	インボイスカセットサイズラベル
9	SPAKA4795FCZZ	AD	DJ	N	D	ADU protect sheet	ADUホゴシート
10	SPAKA4820FCZZ	AD	DJ	N	D	IC11 protect packin A	IC11ホゴザイ A
11	SPAKA4821FCZZ	AD	DJ	N	D	IC11 protect packin B	IC11ホゴザイ B
12	SPAKA4822FCZZ	AD	DJ	N	D	IC11 protect packin C	IC11ホゴザイ C
13	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス

SF-CM11··500カセット給紙ユニット(SF-CM11··500 Cassette paper feeding unit)



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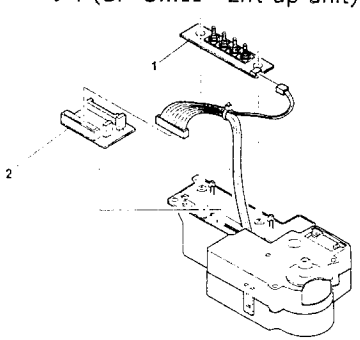
SF-CM11··リフトアップユニット(SF-CM11··Lift up unit)



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40 SF-CM11··500カセット給紙ユニット(SF-CM11··500 Cassette paper feeding unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP50-06000	AA	DD		C	E type ring	Eリング
2	NSFTZ1766FCZZ	AD	DJ	N	C	Pick up roller shaft	ピックアップローラーシャフト
3	MLEVP0589FCZZ	AC	DD	N	C	Pick up roller lever L	ピックUPローラーレバーL
4	NROLR0920FCZZ	AK	EB	N	C	Pick up roller	ピックアップローラー
5	NGERH0863FCZZ	AB	DD	N	C	Pick up roller gear 18T	ピックUPローラーギヤ18
6	NGERH0862FCZZ	AB	DD	N	C	Idle gear 20T	アイドルギヤ20T
7	MLEVP0586FCZZ	AC	DJ	N	C	Pick up roller lever R	ピックUPローラーレバーR
8	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
9	NROLR0901FCZZ	AR	EZ	N	C	Paper feeding roller	キュウシローラー
10	LPINS0096FCZZ	AB	DD		C	Pin (3×12)	ヘイコウピン
11	NGERH0861FCZZ	AB	DD	N	C	Paper feeding roller gear 18T	キュウシローラーギヤ18
12	XRESP70-08000	AA	DD		C	E type ring	Eリング
13	NSFTZ1764FCZZ	AM	EG	N	C	Paper feeding roller shaft	キュウシローラシャフト
14	VHPGP1A71A1-1	AG	DX		B	Photo transistor (GP1A71A1)	フォトトランジスター
15	MLEVP0601FCZZ	AC	DJ	N	C	Sensor lever	センサーレバー
16	LBNDJ0043FCZZ	AA	DD		C	Snap band (SG-130)	スナップバンド
17	MLEVP0588FCZZ	AB	DD	N	C	Solenoid lever	ソレノイドレバー
18	MSPRC1942FCZZ	AB	DD	N	C	Solenoid lever spring	ソレノイドレバースプリング
19	RPLU-0278FCZZ	AQ	EQ	N	B	Pick up solenoid	ピックアップソレノイド
20	PCOVP1154FCZZ	AD	DJ	N	C	Cover	フセンカバー
21	XEPSD30P08X00	AA	DD		C	Screw (3×8X)	ビス
22	MSPRC2012FCZZ	AD	DJ	N	C	Brake spring	ブレーキスプリング
23	DHAi-2049FCZZ	AQ	EZ	N	C	Paper feeding harness 1.2	キュウシハーネス1.2
24	XEBSD30P12000	AA	DD		C	Screw (3×12)	ビス
25	PCLC-0208FCZZ	AW	FQ	N	C	Spring clutch	スプリングクラッチ
26	NBRGC0167FCZZ	AB	DD		C	PF bearing	PFジクウケ
27	LPINS0134FCZZ	AB	DD		C	Pin (2-12)	ヘイコウピン
28	NBRGC0457FCZZ	AD	DJ	N	C	Bearing	ジクウケ
29	CBRC-0048FC01	AS	FG	N	C	Main bracket	メインブラケット
30	QEARB0054FCZZ	AC	DD	N	C	Earth spring	アースバネ
31	XEBSD30P08000	AA	DD		C	Screw (3×8)	ビス
32	LPLTM4057FCZZ	AF	DS	N	C	Reinforce plate	ホキョウバン
33	PGIDM1344FCZZ	AM	EG	N	C	Lower guide	シタガイド
34	XEBSD40P10000	AA	DD		C	Screw (4×10)	ビス
35	CLEVP0587FC01	AE	DJ	N	C	Roller lever	ギャクローラーレバー
36	MSPRC1943FCZZ	AB	DD	N	C	Roller lever spring	ギャクローラーレバースプリング
37	NROLR0902FCZZ	AK	EB	N	C	Reverse roller	ギャクテンローラー
38	NSFTZ1765FCZZ	AH	DX	N	C	Roller shaft	ギャクローラシャフト
39	CCLR-0372FC01	AH	DX	N	C	Collar	シヨウゲツカラー
40	MSPRC1969FCZZ	AF	DS	N	C	Spring	トルクリミッタースプリング
41	PCOVP1142FCZZ	AC	DD	N	C	Cover	トルクリミッターカバー
42	PCLR-0373FCZZ	AC	DD	N	C	Collar	ジユシカラー
43	XPSSJ20-15000	AA	DD	N	C	Pin	ピン
	ユニット (Unit)						
901	DUNT-6546FCZZ	BQ	MJ	N	E	500 cassette paper feeding unit	500カセットキュウシユニット

41 SF-CM11··リフトアップユニット(SF-CM11··Lift up unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	CPWBF0936FC31	AP	EQ	N	E	Cassette size detect PWB 1.2	カセットサイズケンチキバン1.2
2	CPWBF0940FC31	AS	FG	N	E	Lift up motor PWB	リフトUPモーターキバン
	ユニット (Unit)						
901	DUNTM6554FCZZ	BF	HG	N	E	Lift up unit	リフトアップユニット

42 SF-CM11··梱包材&付属品(SF-CM11··Packing material & Accessories)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LSTPP0281FCZZ	AC	DD	N	C	Drawer stopper R(small)	UNヒキダンストッパー R(ショウ)
2	SPAKA4695FCZZ	AN	EQ	N	D	ADU bottom packing cushion	ADUソコ パッキングクッション
3	SPAKA4715FCZZ	AP	EQ	N	D	ADU top packing cushion	ADUテン パッキングクッション
4	SPAKA4719FCZZ	AE	DJ	N	D	PF unit packing cushion A	キュウシユニットパッキング クッション A
5	SPAKA4720FCZZ	AD	DJ	N	D	PF unit packing cushion B	キュウシユニットパッキング クッション B
6	SPAKA4721FCZZ	AD	DJ	N	D	Lift up unit packing cushion A	リフトアップユニットパッキング クッション A
7	SPAKA4722FCZZ	AE	DJ	N	D	Lift up unit packing cushion B	リフトアップユニットパッキング クッション B
8	SSAKA0005WCZZ	AA	DD		D	Vinyl bag (160×260㎜)	ポリブクロ
	SPAKC4718FCZZ	AW	FQ	N	D	Packing case (Japan only)	パッキングケース
	SPAKC4718FC11	AW	FQ	N	D	Packing case (Export)	パッキングケース
9	SSAKA0006UCZZ	AA	DD		D	Vinyl bag(for screw) (50×60㎜)	ポリブクロ
10	SSAKA2540QCZZ	AB	DD		D	Vinyl bag (260×560㎜)	ポリブクロ
11	SSAKH3002KCZZ	AD	DJ		D	Vinyl bag (690×890㎜)	ポリブクロ
12	TCADZ0983FCZZ	AG	DS	N	D	Installation manual (Japan only)	CM11セッチテジュンショ J
	TCADZ0984FCZZ	AG	DS	N	D	Installation manual (USA,Australia,U.Kingdom)	CM11セッチテジュンショ U
	TCADZ0985FCZZ	AT	FG	N	D	Installation manual (Other countries)	CM11セッチテジュンショ E4
13	TLABH2646FCZZ	AB	DD		C	Label	ビスカイコンラベル
14	TLABZ0218FCZZ	AB	DD		C	Packing label	コンポウラベル
15	XEBSD40P12000	AA	DD		C	Screw (4×12)	ビス

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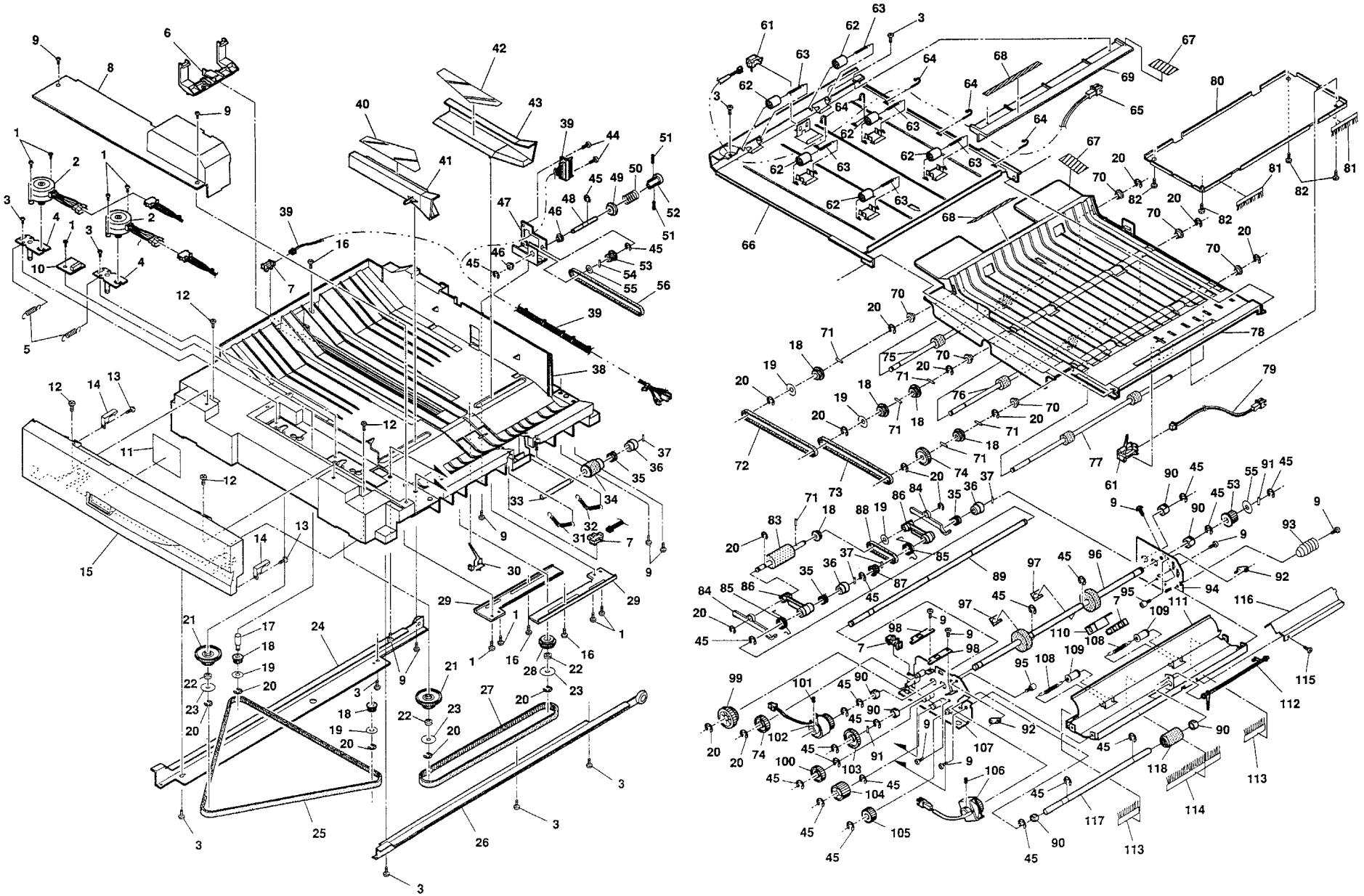
43 SF-DM11··ADUユニット(SF-DM11··ADU unit)



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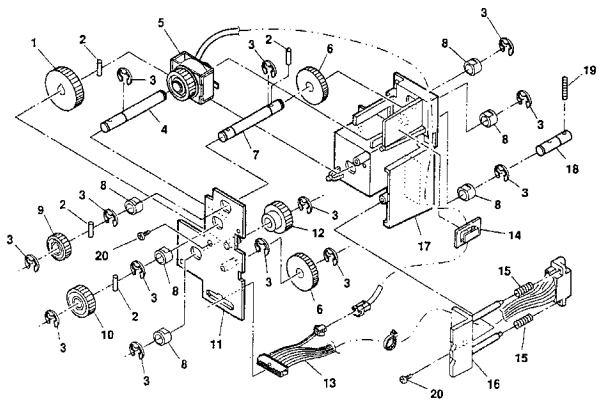
3 SF-DM11‥ADUユニット(SF-DM11‥ADU unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XEPSD30P08000	AA	DD		C	Screw (3×8)	ビス
2	RMOTP0566FCZZ	AV	FQ		B	Stepping motor	ステッピングモーター
3	XEPSD40P08000	AA	DD		C	Screw (4×8)	ビス
4	CPLTM4058FC01	AG	DS	N	C	PM fixing plate	PMトリツケバン
5	MSPRT1944FCZZ	AA	DD	N	C	Belt tension spring	ベルトテンションスプリング
6	PGIDM1347FCZZ	AD	DJ	N	C	Rear guide	コウタンガイド
7	VHPGP1A71A1-1	AG	DX		B	Photo transistor (GP1A71A1)	フォトトランジスター
8	PCOVP1129FCZZ	AK	EB	N	C	Front cover	フロントカバー
9	LX-BZ0180FCZZ	AA	DD		C	Screw (4×10)	ビス
10	CPWBF0954FC31	AS	FG	N	E	ADU diode PWB	ADUダイオードキバン
11	LPLTP4070FCZ5	AK	EB	N	C	Size display plate ADU	サイズヒョウジバンADU
12	XBTSC40P08000	AA	DD		C	Screw (M4×8)	ビス
13	XEPSD40P10000	AA	DD		C	Screw (4×10)	ビス
14	PTME-0223FCZZ	AD	DJ	N	C	Cassette lock pawl	カセットロックツメ
15	JHNDP0107FCZZ	AW	FQ	N	C	Cassette handle	カセットトッテ
16	XBPSD30P06KS0	AA	DD		C	Screw (3×6K)	ビス
17	LBOSZ1414FCZZ	AF	DS	N	C	Pulley boss B	プーリーボスB
18	NPLYZ0146FCZZ	AB	DD		C	Pulley (22MXL)	プーリー
19	PSHEP3029FCZZ	AA	DD		C	Flange sheet DUP2	フランジマイラーDUP2
20	XRESP50-06000	AA	DD		C	E type ring	Eリング
21	NGERH0612FCZZ	AD	DJ		C	SK gear 1	SKギヤ1
22	NBRGC0344FCZZ	AC	DD		C	Bearing (φ6)	ジクウケ
23	PSHEP2340FCZZ	AA	DD		C	Flange sheet DUP	フランジマイラーDUP
24	CRALM0103FC01	AQ	EQ	N	C	ADU rail L	ADUレールL
25	NBLTH0190FCZZ	AG	DS	N	B	Belt (400MXL)	400MXL ベルト
26	CRALM0104FC01	AQ	EQ	N	C	ADU rail R	ADUレールR
27	NBLTH0186FCZZ	AF	DS	N	B	Belt (239MXL)	239MXL ベルト
28	NGERH0613FCZZ	AD	DJ		C	Belt gear	ベルトギヤ
29	NGERR0614FCZZ	AH	DX		C	Rack	ラック
30	MLEVP0591FCZZ	AB	DD	N	C	PE actuator ADU	PEアクチエータADU
31	MSPRT1999FCZZ	AA	DD	N	C	Roller pressure spring F	ギャクローラーアッセツスプリングF
32	MSPRT1934FCZZ	AA	DD	N	C	Reversing roller pressure spring	ギャクローラーアッセツスプリング
33	NSFTZ1767FCZZ	AH	DX	N	C	Reversing roller shaft	ギャクテンローラジク
34	NROLR0909FCZZ	AK	EB	N	C	Reversing roller	ギャクテンローラー
35	MSPRC1006FCZZ	AC	DJ		C	Clutch spring T	クラッチスプリングT
36	PCLR-0230FCZZ	AD	DJ		C	Collar	バネウケ カラー C4
37	LPINS0133FCZZ	AA	DD		C	Pin (2-10)	ヘイコウピン
38	CSOU-0098FC01	BF	HG	N	C	Middle tray	チュウカントレイ
39	DHAI-2051FCZZ	BA	GJ	N	C	ADU harness	ADUハーネス
40	PSHEP3135FCZZ	AC	DD	N	C	Guide sheet F	ガイドマイラーF
41	PGIDM1345FCZZ	AE	DS	N	C	Guide F	セイゴウガイドF
42	PSHEP3136FCZZ	AC	DD	N	C	Guide sheet R	ガイドマイラーR
43	PGIDM1346FCZZ	AE	DS	N	C	Guide R	セイゴウガイドR
44	XBPSD30P06000	AA	DD		C	Screw (3×6)	ビス
45	XRESP70-08000	AA	DD		C	E type ring	Eリング
46	NBRGC2019SCZZ	AC	DJ		C	Bearing (φ8)	ベアリング
47	LPLTM4061FCZZ	AF	DS	N	C	ADU drive plate 3	ADUクドウプレート3
48	NSFTZ1770FCZZ	AH	DX	N	C	ADU drive shaft 4	ADUクドウジク4
49	PSPAZ0095FCZZ	AB	DD		C	Clutch spacer	クラッチスペーサー
50	MSPRC1869FCZZ	AB	DD		C	Clutch pressure spring	クラッチアッチャクスプリング
51	XXXSP30L08000	AB	DD		C	Screw (3×8)	ビス
52	PCLC-0190FCZZ	AC	DD		C	Rotary joint clutch	カイテンレンケツクラッチ
53	NPLYZ0260FCZZ	AC	DD	N	C	Pulley	プーリー(17P-A)
54	LPINS0075FCZZ	AB	DD		C	Pin (φ3-13)	ヘンコウピン
55	PSHEP2348FCZZ	AB	DD		C	Flange sheet DL	フランジマイラーDL
56	NBLTH0191FCZZ	AG	DS	N	B	Belt (153-S3M)	ベルト(153-S3M)
57	VHPGP1S44S/-1	AK	EB	N	B	Photo transistor (GP1S44S)	フォトトランジスター
58	NROLP0512FCZZ	AB	DD		C	Transport roller	ハンソウジュウドウローラー
59	MSPRT1324FCZZ	AA	DD		C	Delivery roller spring rear	ハイシローラースプリング ウシロ
60	LBNDJ0037FCZZ	AA	DD		C	Wire fixing band (T18S)	ワイヤーコテイバンド
61	DHAI-2053FCZZ	AG	DS	N	C	DPPD1 interface harness	DPPD1インターフェイスハーネス
62	CGIDH1360FC01	AY	FX	N	C	Transport paper guide upper	ハンソウペーパーガイドウエ
63	PSHEZ3200FCZZ	AB	DD	N	C	Cabinet protect sheet	キャビネットシート
64	TLABZ3218FCZZ	AC	DD	N	C	Handle label	トッテラベル
65	JHNDP0111FCZZ	AK	EB	N	C	Paper guide cover handle ADU	ペーパーガイドカバーハンドルADU
66	NBRGC0188FCZZ	AB	DD		B	PF bearing	PFジクウケ
67	LPINS0165FCZZ	AB	DD		C	Pin (02×8)	ヘイコウピン
68	NBLTH0189FCZZ	AF	DS	N	B	Belt (150MXL)	150MXL ベルト
69	NBLTH0188FCZZ	AF	DS	N	B	Belt (155MXL)	155MXL ベルト
70	NGERH0209FCZZ	AC	DD		C	Gear (24T)	ギヤー
71	NROLR0905FCZZ	AN	EQ	N	C	ADU roller 1	ADUローラー1
72	NROLR0906FCZZ	AP	EQ	N	C	ADU roller 2	ADUローラー2
73	NROLR0907FCZZ	AP	EQ	N	C	ADU roller 3	ADUローラー3
74	PGIDM1348FCZZ	AW	FQ	N	C	Transport guide lower	ハンソウペーパーガイドシタ
75	DHAI-2054FCZZ	AF	DS	N	C	DPPD2 interface harness	DPPD2インターフェイスハーネス
76	LPLTM4169FCZZ	AK	EB	N	C	Paper guide lower sub plate	ペーパーガイドシタホジョバン
77	PBRSS0122FCZZ	AE	DJ	N	B	Discharge brush 3	ジョデンブラシ3
78	XEPSD40P06000	AA	DD		C	Screw (4×6)	ビス
79	NROLR0904FCZZ	AP	EQ	N	C	Roller	ローラー
80	MARMP0150FCZZ	AB	DD	N	C	Paper fixing arm	ペーパーセアー

43 SF-DM11‥ADUユニット(SF-DM11‥ADU unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
85	MSPRD1945FCZZ	AB	DD	N	C	Roller return spring	ローラーフッキスプリングF
86	MARMP0149FCZZ	AH	DX	N	C	Roller arm ADU	ローラーアームADU
87	NPLYZ0106FCZZ	AC	DJ		C	Pulley 22	プーリー 22
88	NBLTH0187FCZZ	AE	DS	N	B	Belt (65MXL)	65MXL ベルト
89	NSFTZ1769FCZZ	AQ	EQ	N	C	Roller shaft	ヨビコミローラジク
90	NBRGC0080FCZZ	AD	DJ		C	DFC bearing	DFCヨウジクウケ
91	LPINS0155FCZZ	AA	DD		C	Pin (φ3-10)	ヘンコウピン
92	CPLTM4060FC01	AD	DJ	N	C	Paper guide fulcrum plate	ペーパーガイドシテンバン
93	QEARB0055FCZZ	AA	DD	N	C	ADU earth spring	ADUアーススプリング
94	LFRM-0742FCZZ	AG	DX	N	C	ADU frame R	ADUフレームR
95	LX-BZ0326FCZZ	AA	DD		C	Screw	ダンビス
96	NROLR0903FCZZ	AR	EZ	N	C	Return roller	リターンローラー
97	LHLDZ1088FCZZ	AB	DD	N	C	SP holder	SPホルダー
98	LPLTM4059FCZZ	AC	DD	N	C	CL stopper plate	CLストッパープレート
99	CGERH0430FC01	AD	DJ		C	Gear (20/32T)	ギヤー
100	NGERH0140FCZZ	AC	DD		C	Stirring gear U (25T)	カクハンヨウギヤー
101	LX-BZ0193FCZZ	AB	DD		C	Screw (3×4)	ビス
102	PCLC-0129FCZZ	AV	FQ		C	Electromagnetic clutch (22T)	デンジクラッチ
103	NGERH0562FCZZ	AD	DJ		C	Feed shaft gear (30T)	フィードジクギヤー
104	NGERH0275FCZZ	AE	DS		C	PF gear (24T)	PFギヤー
105	NGERH0295FCZZ	AC	DJ		C	Transport roller drive gear	ハンソウローラークドウギヤー
106	PCLC-0207FCZZ	AW	FQ	N	C	CW electromagnetic clutch (22T)	CWデンジクラッチ
107	CFRM-0741FC01	AN	EQ	N	C	ADU frame F	ADUフレームF
108	MSPRT1639FCZZ	AA	DD		C	Desk spring	デスクジュウドウスプリング
109	PCLR-0370FCZZ	AC	DD	N	C	Collar	シュッコロ
110	LPLTM4110FCZZ	AE	DS	N	C	Paper detect switch fixing plate	シュッシケンチスイッチトリツケイタ
111	PGIDH1359FCZZ	AQ	EZ	N	C	Return paper guide	リターンペーパーガイド
112	MLEVP0602FCZZ	AC	DJ	N	C	ADU paper actuator	ADUシュッシアクチュエーター
113	PBRSS0121FCZZ	AE	DS	N	B	Discharge brush 2	ジョデンブラシ 2
114	PBRSS0119FCZZ	AF	DS	N	B	Discharge brush	ジョデンブラシ
115	LX-BZ0465FCZZ	AA	DD		C	Screw	ビス
116	LPLTM4168FCZZ	AE	DS	N	C	Cover plate ADU	カバープレートADU
117	NSFTZ1768FCZZ	AH	DX	N	C	Paper feeding roller shaft	キュウシローラージク
118	NROLR0901FCZZ	AR	EZ	N	C	Paper feeding roller	キュウシローラー
	ユニット (Unit)						
901	DUNTM6566FCZZ	CL	UZ	N	E	ADU unit	ADU ユニット

44 SF-DM11‥ADU駆動ユニット(SF-DM11‥ADU drive unit)



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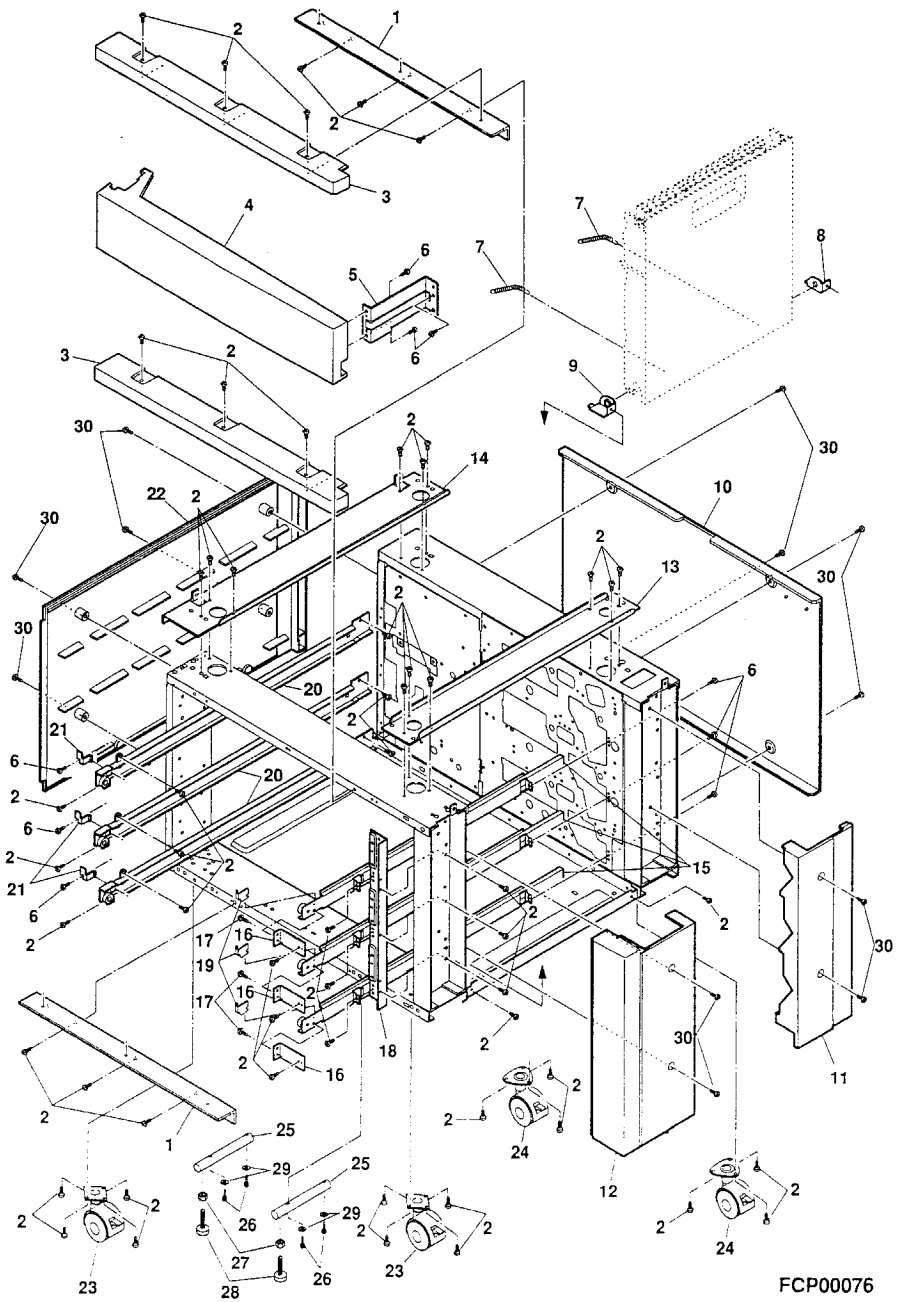
44 SF-DM11‥ADU駆動ユニット(SF-DM11‥ADU drive unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	NGERH0851FCZZ	AD	DJ	N	C	Gear (33T)	33Tギヤー
2	LPINS0155FCZZ	AA	DD		C	Pin (φ3−10)	ヘンコウピン
3	XRESP70−08000	AA	DD		C	E type ring	E リング
4	NSFTZ1754FCZZ	AG	DX	N	C	ADU drive shaft 2	ADUクドウジク2
5	PCLC−0210FCZZ	AW	FQ	N	C	Transport clutch	ハンソウクラッチ
6	NGERH0071FCZZ	AD	DJ		C	DV gear R (31T)	DV ギヤー R
7	NSFTZ1753FCZZ	AH	DX	N	C	ADU drive shaft 1	ADUクドウジク1
8	NBRGC0080FCZZ	AD	DJ		C	DFC bearing	DFCヨウジクウケ
9	NGERH0128FCZZ	AC	DD		C	Gear (24T)	24Tギヤー(ナイロン)
10	NGERH0457FCZZ	AC	DD		C	DV drive gear R	DVクドウギヤー R
11	CPLTM4038FC01	AK	EB	N	C	ADU drive plate 1	ADUクドウプレート1
12	NGERH0205FCZZ	AC	DD		C	Fusing knob gear (20T)	テイチャクノブギヤー
13	DHA‥−2052FCZZ	AV	FQ	N	C	ADU interface harness	ADUチュウケイハーネス
14	LHLDW0544FCZZ	AC	DD		C	Harness clamp (FCA−10)	ハーネスクランプ
15	MSPRC1967FCZZ	AA	DD	N	C	Connector spring ADU	コネクタースプリング ADU
16	CDA‥U0460FC01	AM	EG	N	C	ADU drive base	ADUクドウホジダイ
17	LDA‥U0457FCZZ	AH	DX	N	C	ADU drive block	ADUクドウブロック
18	NSFTZ1800FCZZ	AG	DX	N	C	ADU drive shaft 3	ADUクドウジク3
19	XXXSP30L08000	AB	DD		C	Screw (3×8)	ビス
20	XEBSD40P08000	AA	DD		C	Screw (4×8)	ビス
	ユニット (Unit)						
901	CPLTM4038FC31	BL	HZ	N	E	ADU drive unit	ADUクドウ ユニット

45 SF-DM11‥梱包材&付属品(SF-DM11‥Packing material & Accessories)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LSTPP0281FCZZ	AC	DD	N	C	Drawer stopper R(small)	UNヒキダシストッパー R(ショウ)
2	SPAKA4695FCZZ	AN	EQ	N	D	ADU bottom packing cushion	ADUソコ パッキングクッション
3	SPAKA4715FCZZ	AP	EQ	N	D	ADU top packing cushion	ADUテンパッキングクッション
4	SPAKA4716FCZZ	AA	DD	N	D	ADU protect sheet	ADUホゴシート
5	SPAKA4717FCZZ	AD	DJ	N	D	ADU reinforce packing cushion	ADUホキョウザイ
6	SPAKA4795FCZZ	AD	DJ	N	D	ADU protect sheet B	ADUホゴシートB
7	SPAKA4796FCZZ	AD	DJ	N	D	ADU fixing packing cushion	ADUコテイザイ
8	SPAKC4714FCZZ	AX	FX	N	D	Packing case (Japan only)	パッキングケース
	SPAKC4714FC11	AX	FX	N	D	Packing case (Export)	パッキングケース
9	SSAKA0006UCZZ	AA	DD		D	Vinyl bag(for screw,stopper) (50×60㎜)	ポリブクロ(ビス,ストッパーヨウ)
10	SSAKA2340QCZZ	AA	DD		D	Vinyl bag(for drive unit) (200×300㎜)	ポリブクロ(クドウUNヨウ)
11	SSAKH3002KCZZ	AD	DJ		D	Vinyl bag(for body) (690×890㎜)	ポリブクロ(ホンタイヨウ)
12	TCADZ1018FCZZ	AG	DS	N	D	Card (Japan only)	DM11セッチテジュンショ
	TCADZ1019FCZZ	AG	DS	N	D	Card (USA,Australia,U,Kingdom)	DM11 セッチテジュンショ U
	TCADZ1020FCZZ	AN	EG	N	D	Card (Other countries)	DM11 セッチテジュンショ E4
13	TLABZ0218FCZZ	AB	DD		C	Packing label	ユンボウラベル
14	TLABZ3217FCZZ	AD	DJ	N	C	JAM instruction label	JAMショリセツメイラベル
15	XBPSD40P08KS0	AA	DD		C	Screw (4×8KS)	ビス

46 SF-D19,D19H‥デスク外装(SF-D19,D19H‥Desk exteriors)



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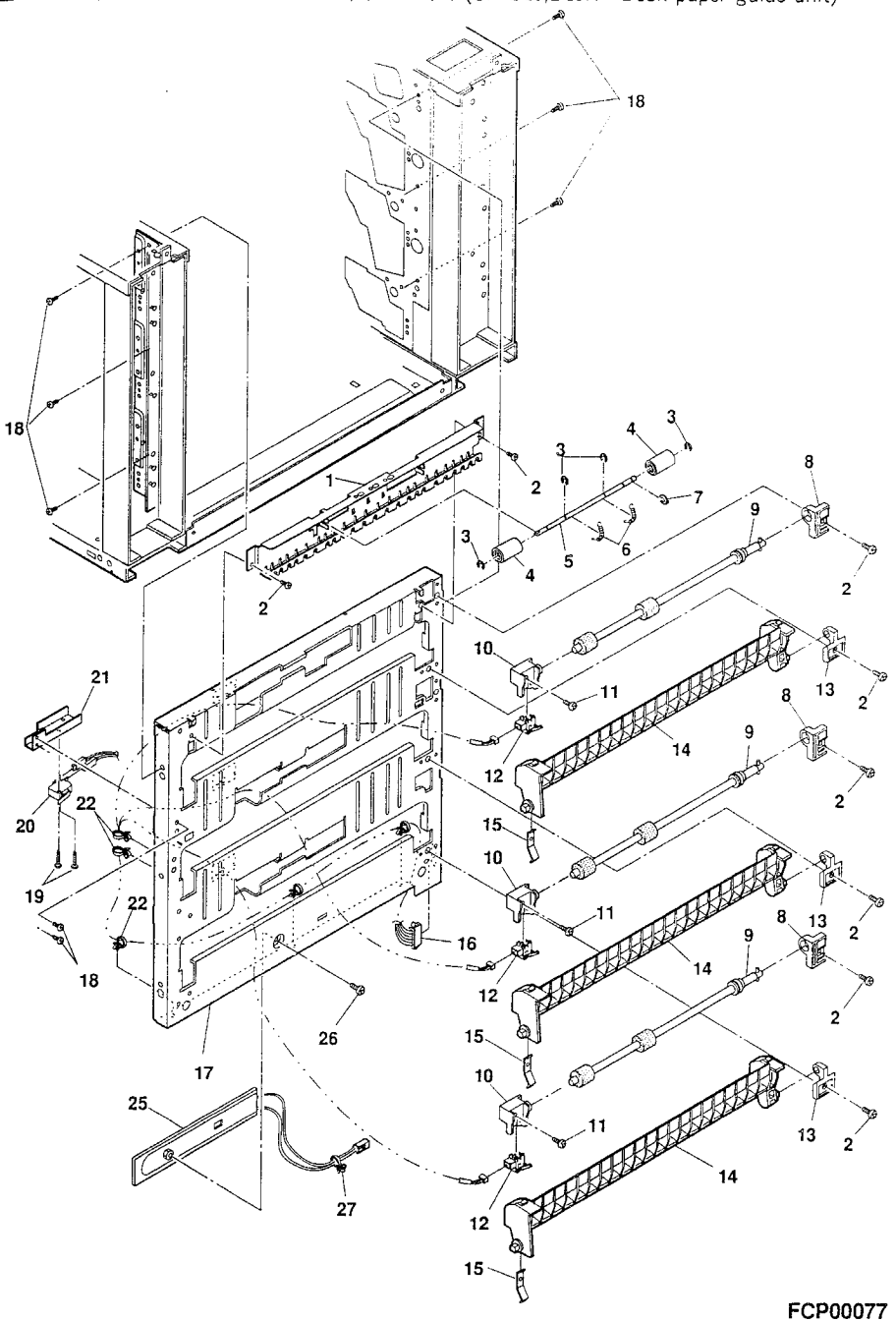
16 SF-D19,D19H‥デスク外装(SF-D19,D19H‥Desk exteriors)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPLTM4115FCZZ	AK	EB	N	C	Front cover fixing plate	フロントカバートリツケイタ
2	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
3	PCOVP1125FCZZ	AQ	EZ	N	C	Front cover	フロントカバーB9
4	GCAB-0759FCZZ	AU	FQ	N	D	Cassette exterior	カクシガイソウカセット
5	LPLTM4117FCZZ	AF	DS	N	C	Cassette exterior fixing plate	カクシガイソウトリツケイタDS
6	LX-BZ0180FCZZ	AA	DD		C	Screw	ビス
7	MSPRC1981FCZZ	AB	DD	N	C	Transport guide release spring	ハンソウガイドカイヘイスプリング
8	LPLTM4084FCZZ	AD	DJ	N	C	Transport guide fulcrum plate R	ハンソウガイドシテンプレートR
9	LPLTM4083FCZZ	AD	DJ	N	C	Transport guide fulcrum plate F	ハンソウガイドシテンプレートF
10	GCAB-0757FCZZ	AY	GD	N	D	Exterior Rear	ガイソウ ウシロ
11	GCAB-0758FCZZ	AR	EZ	N	D	Exterior RR	ガイソウR R
12	GCAB-0755FCZZ	AW	FX	N	D	Exterior RF	ガイソウR F
13	LSTYM0186FCZZ	AN	EQ	N	C	Stay right	ヨコステイ ミギ
14	LSTYM0185FCZZ	AQ	EZ	N	C	Stay left	ヨコステイ ヒダリ
15	CRALM0106FC01	AR	EZ	N	C	Drawer rail R	ヒキダシレールR
16	LPLTM4077FCZZ	AE	DS	N	C	Rail sub plate	レールホジョバン
17	LX-BZ7025XCZZ	AB	DD		C	Screw (4×6)	ビス
18	LPLTM4075FCZZ	AL	EG	N	C	Pipe sub plate	シチュウホジョプレート
19	LSTPP0281FCZZ	AC	DD	N	C	Drawer stopper	UNヒキダシストッパー Rショ
20	CRALM0105FC01	AR	EZ	N	C	Drawer rail L	ヒキダシレールL
21	LSTPF0282FCZZ	AE	DJ	N	C	Casstte stopper	カセットレールストッパーDSK
22	GCAB-0756FCZZ	BB	GJ	N	D	Exterior L	ガイソウL
23	GLEGM0046FCZZ	AP	EQ		C	Caster F	キャスターF
24	GLEGM0047FCZZ	AP	EQ		C	Caster R	キャスターR
25	LPLTM4125FCZZ	AP	EQ	N	C	Adjuster fixing plate	アジャスタートリツケイタ
26	XXHSP40L25000	AB	DD		C	Screw (4×25)	ビス
27	XNESD80-65000	AA	DD		C	Nut	ナット
28	PAJS-0009FCZZ	AD	DJ		C	Adjuster N	アジャスター N
29	XWHSD40-08100	AA	DD		C	Washer	ワッシャ
30	XBBSC40P08000	AA	DD		C	Screw	ビス

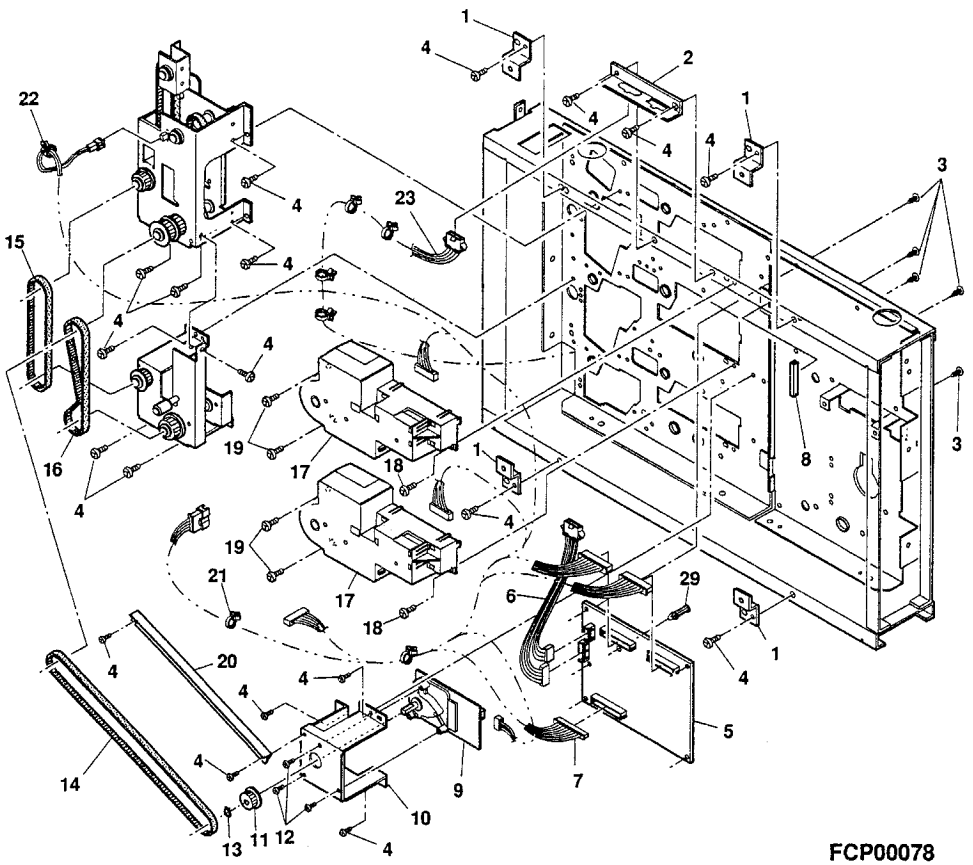
17 SF-D19,D19H‥デスクペーパーガイドユニット(SF-D19,D19H‥Desk paper guide unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PGIDH1367FCZZ	AM	EG	N	C	Paper guide 2	ペーパガイド2
2	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
3	XRESP50-06000	AA	DD		C	E type ring	Eリング
4	NROLP0896FCZZ	AC	DD	N	C	Transport roller	ハンソウジュウドウローラー
5	NSFTZ1775FCZZ	AK	EB	N	C	Transport shaft	ハンソウジュウドウジク
6	MSPRT1960FCZZ	AA	DD	N	C	Transport spring	ハンソウジュウドウスプリング
7	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
8	LHLDZ1103FCZZ	AD	DJ	N	C	Roller holder R	ローラーホルダーR
9	CROLR0938FC01	AR	EZ	N	C	Transport roller	ハンソウローラーB9B
10	LHLDZ1082FCZZ	AC	DJ	N	C	Roller holder FB	ローラーホルダーFB
11	XBPSD40P18000	AA	DD		C	Screw (4×18)	ビス
12	QSW-L0443FCZZ	AM	EG	N	B	Lead switch (PID1)	リードスイッチ
13	LHLDZ1081FCZZ	AC	DJ	N	C	U-turn paper guide holder L	Uターンペーパーガイドホルダ L
14	PGIDM1340FCZZ	AM	EG	N	C	U-turn paper guide A	Uターンペーパーガイド-A
15	MSPRT1939FCZZ	AB	DD	N	C	U-turn paper guide spring	Uターンペーパーガイドスプリング
16	DHAI-2030FCZZ	AR	EZ	N	C	Transport interface harness (SF-D19,SF-D19H)	ハンソウチュウケイハーネス3カセ
17	PGIDH1366FCZZ	AY	FX	N	C	Paper guide 1	ペーパガイド1
18	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
19	XBPSD30P12000	AA	DD		C	Screw (3×12)	ビス
20	QSW-M0319FCZZ	AG	DS		B	Door switch	ドアースイッチ
21	LPLTM4126FCZZ	AH	DX	N	C	Transport guide switch fixing plate	ハンソウガイドSWトリツケイタ
22	LBNDJ0013FCZZ	AA	DD		C	Wire band	コンベックス
25	RHETP0057FCZZ	AX	FX	N	B	Dry heater-2 (SF-D19H)	ジョンツヒーター2
26	LX-BZ0319FCZZ	AC	DD		C	Screw (4×6) (SF-D19H)	ビス
27	LBNDJ0043FCZZ	AA	DD		C	Snap band (SG-130) (SF-D19H)	スナップバンド

47 SF-D19,D19H‥デスクペーパーガイドユニット(SF-D19,D19H‥Desk paper guide unit)



48 SF-D19,D19H‥デスク後フレーム(SF-D19,D19H‥Desk rear frame)



48 SF-D19,D19H‥デスク後フレーム(SF-D19,D19H‥Desk rear frame)

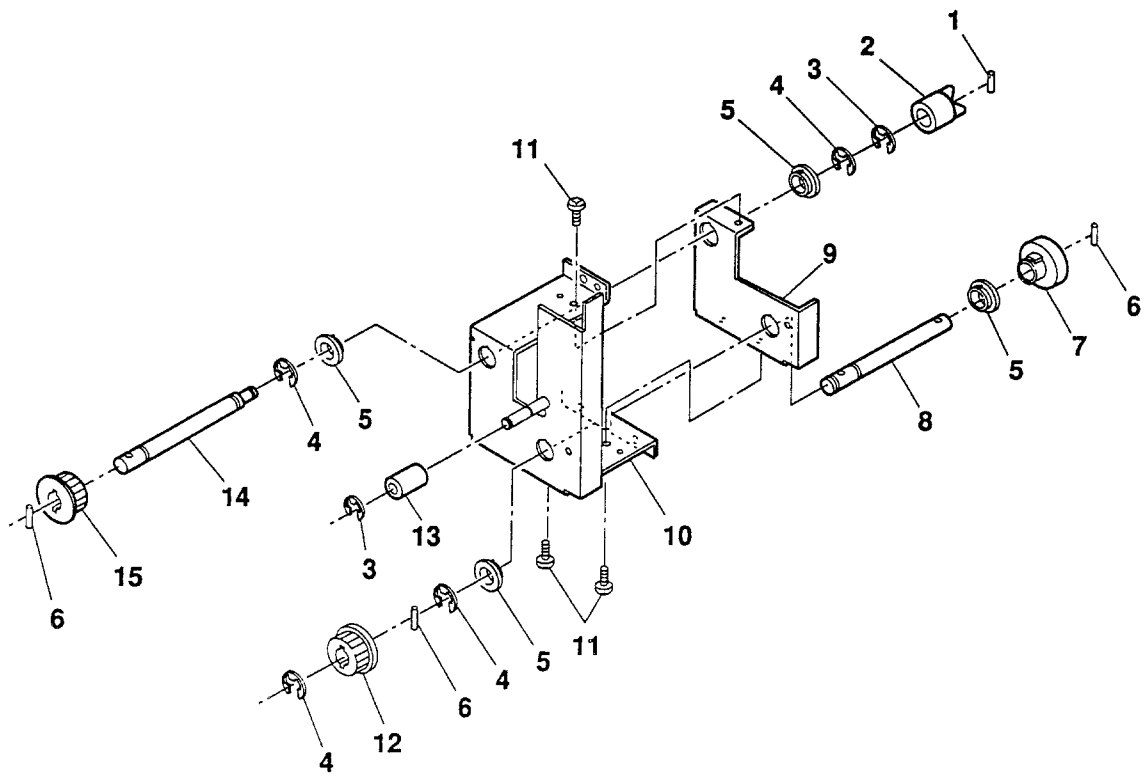
NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPLTM4118FCZZ	AE	DS	N	C	Rear exterior fixing plate	ウシロザ
2	LPLTM4101FCZZ	AD	DJ	N	C	Harness fixing plate DSK	ハーネス
3	LHLDW2126SCZZ	AB	DD		C	Holder (KGLS-8RT)	ホルダー
4	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
5	CPWBF0938FC51	BQ	MP	N	E	Desk main PWB	デスクメイ
6	DHAi-2031FCZZ	AP	EQ	N	C	Body interface harness	ボタイキ
7	DHAi-2034FCZZ	BA	GJ	N	C	Main harness	(SF-D19,SF-D19H) メインハ
8	LBSHC0164FCZZ	AB	DD		C	Bushing	ブッシン
9	RMOTP0692FCZZ	BP	MB	N	B	Main motor	メインモー
10	LPLTM4080FCZZ	AL	EB	N	C	Main motor fixing plate	MMトリツ
11	NPLYZ0264FCZZ	AC	DJ	N	C	Main motor pulley	MMプーリ
12	LX-BZ0180FCZZ	AA	DD		C	Screw (4×10)	ビス
13	LX-WZ0077FCZZ	AA	DD		C	Stop ring (G8)	ストップリ
14	NBLTH0198FCZZ	AH	DX	N	B	Belt (S3M537)	(SF-D19,SF-D19H) ベルト(S3M
15	NBLTH0195FCZZ	AH	DX	N	B	Belt (S2M264)	(SF-D19,SF-D19H) ベルト(S2M
16	NBLTH0193FCZZ	AH	DX	N	B	Belt (S3M300)	(SF-D19,SF-D19H) ベルト(S3M
17	DUNTM6554FCZZ	BF	HG	N	E	Lift up unit	リフトアッ
18	XBBSD40P10000	AA	DD		C	Screw (4×10)	ビス
19	XBBSD40P30000	AA	DD		C	Screw (4×30)	ビス
20	LSTYM0188FCZZ	AF	DS	N	C	Main motor fixing stay B	(SF-D19,SF-D19H) MMトリツ
21	LBNDJ0043FCZZ	AA	DD		C	Band (SG-130)	スナップバ
22	LBNDJ0013FCZZ	AA	DD		C	Wire band	コンベック
23	DHAi-2101FCZZ	AK	EB	N	C	Desk heater harness H	(SF-D19H) デスクヒー
29	LSUPP0077FCZZ	AB	DD	N	C	PWB supporter	キバンサポ

49 SF-D19,D19H‥デスク駆動ボックス上ユニット(SF-D19,D19H‥Desk drive box upper unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP70-08000	AA	DD		C	E type ring	Eリング
2	NPLYZ0265FCZZ	AC	DD	N	C	Transport pulley	ハンソウプー
3	LPiNS0075FCZZ	AB	DD		C	Pin (φ3-10)	ヘンコウピン
4	NBRGC2019SCZZ	AC	DJ		B	Bearing (φ8)	ベアリング
5	NCPL-0014FCZZ	AC	DJ	N	C	Transport cup ring	ハンソウカッ
6	LPiNS0134FCZZ	AB	DD		C	Pin (φ2-12)	ヘイコウピン
7	NCPL-0013FCZZ	AC	DD	N	C	Paper feeding cup ring	キュウシカッ
8	XRESP50-06000	AA	DD		C	E type ring	Eリング
9	NSFTZ1786FCZZ	AL	EG	N	C	25 Pulley shaft center	25プーリシ
11	NPLYZ0266FCZZ	AC	DJ	N	C	Paper feeding joint pulley	キュウシレン
12	NGERH0457FCZZ	AC	DD		C	DV drive gear R	DVクドウギ
13	NROLP0916FCZZ	AB	DD	N	C	Paper feeding belt guide roller	キュンベルト
14	CPLTM4078FC01	AQ	EZ	N	C	Drive box A	クドウボック
15	NGERH0869FCZZ	AC	DD	N	C	22/20T gear	22/20Tギヤ
16	NGERH0870FCZZ	AC	DD	N	C	18T gear	18Tギヤ
17	NSFTZ1785FCZZ	AH	DX	N	C	25 Pulley shaft upper	25プーリシ
18	NBLTH0193FCZZ	AH	DX	N	B	Belt (S3M300)	ベルト(S3M3
19	NBLTH0192FCZZ	AH	DX	N	B	Belt (S2M285)	ベルト(S2M2
20	NSFTZ1782FCZZ	AB	DD	N	C	16 Pulley shaft upper	16プーリシ
21	PCLC-0210FCZZ	AW	FQ	N	C	Transport clutch	ハンソウクラ
22	NSFTZ1781FCZZ	AL	EB	N	C	16 Pulley shaft center	16プーリシ
23	LPLTM4079FCZZ	AP	EQ	N	C	Drive box B	クドウボック
24	XHPSD40P10000	AA	DD		C	Screw (4×10)	ビス

50 SF-D19,D19H··デスク駆動ボックス下ユニット(SF-D19,D19H··Desk drive box lower unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPiNS0134FCZZ	AB	DD		C	Pin (2−12)	(SF−D19,SF−D19H) ヘイコウピン
2	NCPL−0014FCZZ	AC	DJ	N	C	Transport cup ring	(SF−D19,SF−D19H) ハンソウカップリング
3	XRESP50−06000	AA	DD		C	E type ring	(SF−D19,SF−D19H) Eリング
4	XRESP70−08000	AA	DD		C	E type ring	(SF−D19,SF−D19H) E リング
5	NBRGC2019SCZZ	AC	DJ		B	Bearing (φ8)	(SF−D19,SF−D19H) ベアリング
6	LPiNS0075FCZZ	AB	DD		C	Pin (φ3×10)	(SF−D19,SF−D19H) ヘイコウピン
7	NCPL−0013FCZZ	AC	DD	N	C	Paper feeding cup ring	(SF−D19,SF−D19H) キユウシカップリング
8	NSFTZ1788FCZZ	AH	DX	N	C	25 Pulley shaft lower	(SF−D19,SF−D19H) 25プーリジク シタ
9	LPLTM4082FCZZ	AF	DS	N	C	Drive box lower D	(SF−D19,SF−D19H) クドウボックス シタD
10	CPLTM4081FC01	AR	EZ	N	C	Drive box lower C	(SF−D19,SF−D19H) クドウボックス シタC
11	XHBSE40P10000	AA	DD		C	Screw (4×10)	(SF−D19,SF−D19H) ビス
12	NPLYZ0266FCZZ	AC	DJ	N	C	Paper feeding joint pulley	(SF−D19,SF−D19H) キュウシレンケツプーリー
13	NROLP0916FCZZ	AB	DD	N	C	Paper feeding belt guide roller	(SF−D19,SF−D19H) キュシベルトガイドローラー
14	NSFTZ1787FCZZ	AK	EB	N	C	16 Pulley shaft lower	(SF−D19,SF−D19H) 16プーリジク シタ
15	NPLYZ0265FCZZ	AC	DD	N	C	Transport pulley	(SF−D19,SF−D19H) ハンソウプーリー



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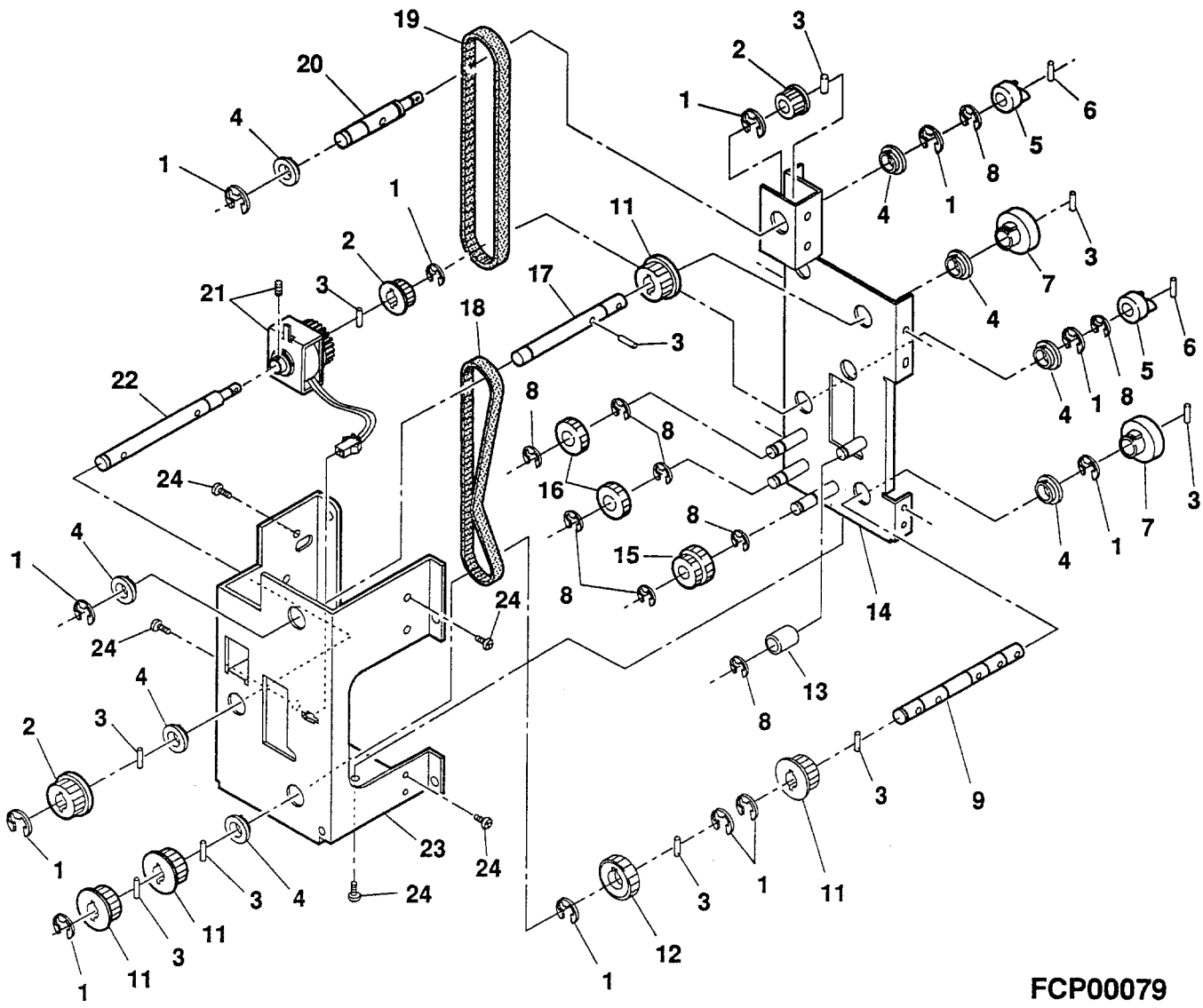
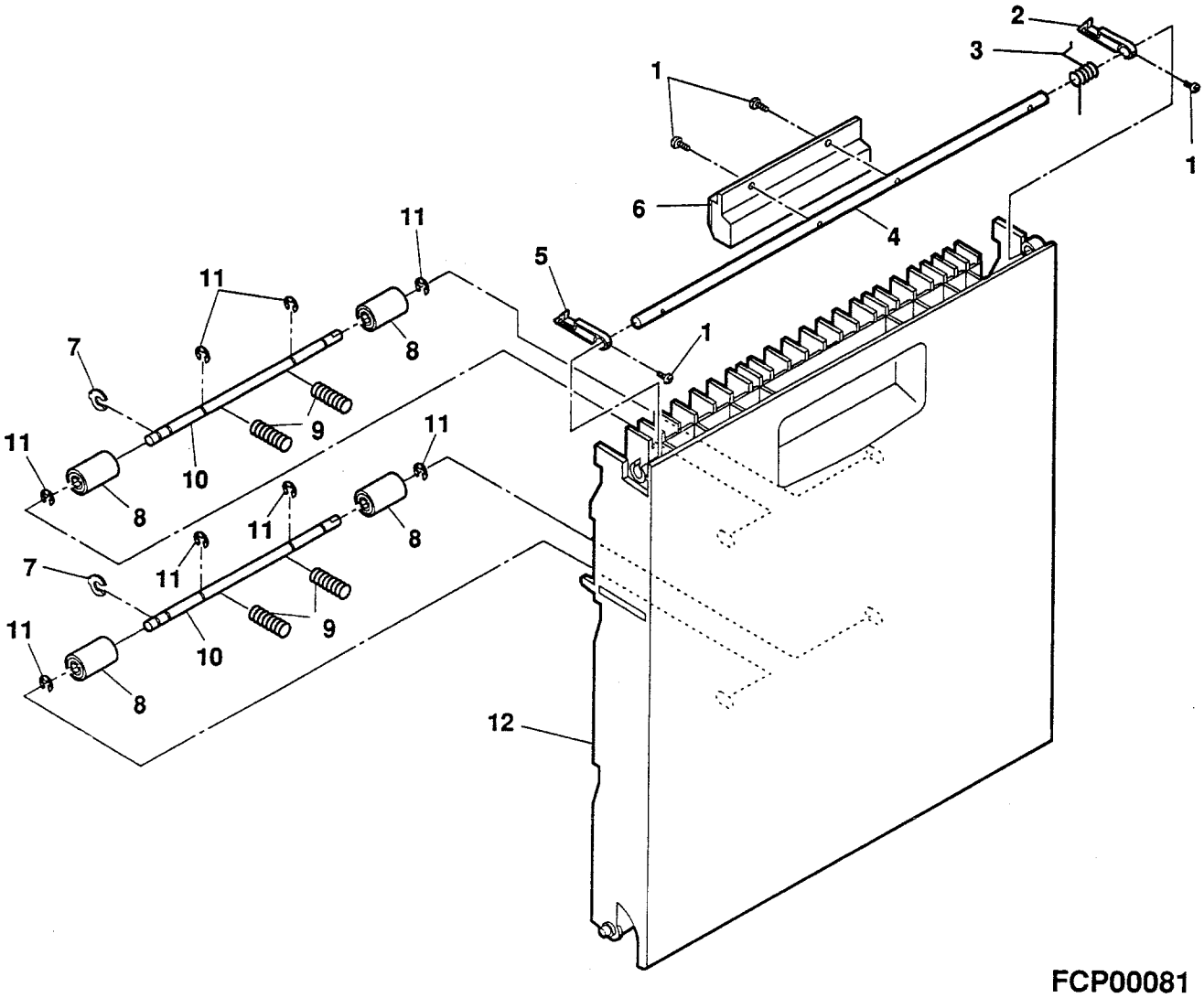
49 SF-D19,D19H‥デスク駆動ボックス上ユニット(SF-D19,D19H‥Desk drive box upper unit)



51 SF-D19,D19H‥デスク搬送ガイドユニット(SF-D19,D19H‥Desk transport guide unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XBBSD30P06000	AA	DD		C	Screw (3×6)	ビス
2	MLEVP0608FCZZ	AE	DJ	N	C	Guide lock lever R	ガイドロックレバーR
3	MSPRD1949FCZZ	AB	DD	N	C	Guide lock release spring	ガイドロックカイジョスプリング
4	NSFTZ1735FCZZ	AN	EG	N	C	Guide lock release shaft	ガイドロックカイジョジク
5	MLEVP0598FCZZ	AE	DJ	N	C	Guide lock lever	ガイドロックレバー
6	MLEVP0595FCZZ	AF	DS	N	C	Guide lock release lever	ガイドロックカイジョレバー
7	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
8	NROLP0896FCZZ	AC	DD	N	C	Transport roller	ハンソウジュウドウローラー
9	MSPRC1948FCZZ	AB	DD	N	C	Roller pressure spring	ローラーアツセツスプリング
10	NSFTZ1775FCZZ	AK	EB	N	C	Transport shaft	ハンソウジュウドウジク
11	XRESP50-06000	AA	DD		C	E type ring	Eリング
12	PGiDM1365FCZZ	BC	GT	N	C	Transport guide	ハンソウガイド



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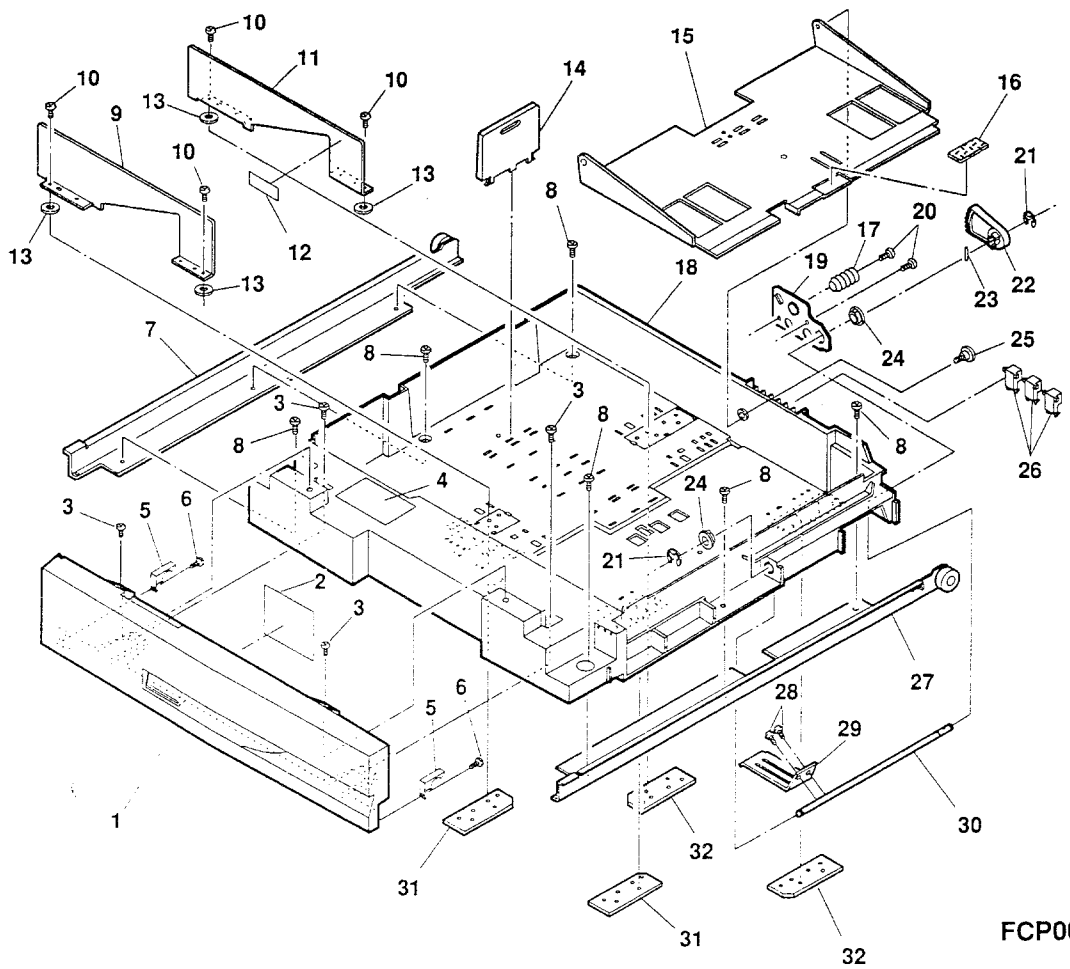
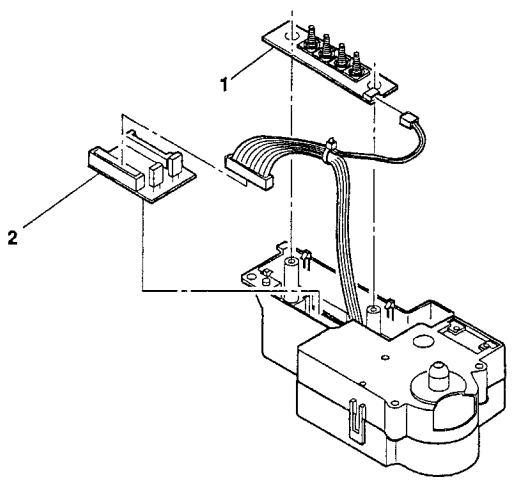
52 SF-D19, D19H,D20‥カセット一体ドロアーユニット(SF-D19, D19H, D20‥ Cassette assembly unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION		
1	JHNDP0107FCZZ	AW	FQ	N	C	Cassette handle		カセットトッテ B9
2	LPLTP4070FCZZ	AM	EG	N	C	Size display plate (Japan only)	(SF−D19,SF−D19H)	サイズヒョウジバン J
	LPLTP4070FCZ1	AK	EB	N	C	Size display plate (Export‥AB series)	(SF−D20)	サイズヒョウジバン AB
	LPLTP4070FCZ2	AK	EB	N	C	Size display plate (Inch series)	(SF−D20)	サイズヒョウジバン IN
3	XBTSC40P08000	AA	DD		C	Screw (4×8)		ビス
4	TLABZ3105FCZZ	AD	DJ	N	C	Cassette instruction label		カセットセツメイラベル
5	PTME−0223FCZZ	AD	DJ	N	C	Cassette lock pawl		カセットロックツメ
6	XEPSD40P10000	AA	DD		C	Screw (4×10)		ビス
7	CRALM0111FC01	AQ	EZ	N	C	Cassette rail L(Small)		カセットレールL(ショウ)
8	XBPSD40P06000	AA	DD		C	Screw (4×6)		ビス
9	LPLTM4039FCZZ	AL	EB	N	C	Side plate F		ソクバンF B9−C
10	XBPSD40P08000	AA	DD		C	Screw (4×8)		ビス
11	CPLTM4040FC01	AP	EQ	N	C	Side plate R		ソクバンR B9−C
12	TLABZ3020FCZZ	AC	DD		C	Indication label N1		シジセンラベルN1
13	LX−WZ0317FCZZ	AA	DD	N	C	Washer		ワッシャ
14	LPLTP4023FCZZ	AD	DJ	N	C	Rear plate		コウタンバン
15	LPLTM4041FCZZ	AT	FQ	N	C	Rotation plate		カイテンバンB9−C
16	PSHEZ3130FCZZ	AB	DD	N	C	Rotation plate sheet		カイテンイタシートクラリノ
17	QEARB0056FCZZ	AA	DD	N	C	500 cassette earth spring		500カセアーススプリング
18	GCASP0156FCZZ	BB	GN	N	D	Cassette drawer case		カセットイッタイドロアーケース
19	LPLTM4044FCZZ	AF	DS	N	C	Drawer base plate		ドロアベースバン
20	XEBSD40P10000	AA	DD		C	Screw (4×10)		ビス
21	XRESP60−08000	AA	DD		C	E type ring		Eリング
22	NGERH0859FCZZ	AD	DJ	N	C	Gear		センケイギヤ
23	LPiNS0157FCZZ	AB	DD		C	Pin (φ3L14)		ヘイコウピン
24	NBRGC0167FCZZ	AB	DD		C	PF bearing		PFジクウケ
25	LX−BZ0138FCZZ	AB	DD		C	Screw		ダンビス
26	LDAiU0449FCZZ	AC	DJ	N	C	Size detector block		サイズケンチブロック
27	CRALM0110FC01	AQ	EZ	N	C	Cassette rail R(Small)		カセットレールR(ショウ)
28	XBBSD30P08000	AA	DD		C	Screw (3×8)		ビス
29	LPLTM4043FCZZ	AF	DS	N	C	Lift plate		リフトプレートB9C
30	NSFTZ1760FCZZ	AM	EG	N	C	Lift shaft		リフトシャフト B9
31	LPLTM4042FCZZ	AF	DS	N	C	Side plate fixing plate		ソクバンコテイバン
32	LPLTM4042FCZ1	AG	DX	N	C	Side plate fixing plate R		ソクバンコテイバン R
	ユニット (Unit)							
901	CCASP0156FC31	BR	MW	N	E	B5 Cassette drawer case unit (Japan only)	(SF−D19,SF−D19H)	カセ1ドロアJユニット B5
	CCASP0156FC34	BR	MW	N	E	A4R Cassette drawer case unit (Export‥AB series)	(SF−D20)	カセ1ドロアユニット A4R
	CCASP0156FC35	BR	MW	N	E	LT−R Cassette drawer case unit (Inch series)	(SF−D20)	カセ1ドロアユニット レターR



3 SF-D19,D19H,D20‥リフトアップユニット(SF-D19,D19H,D20‥Lift up unit)



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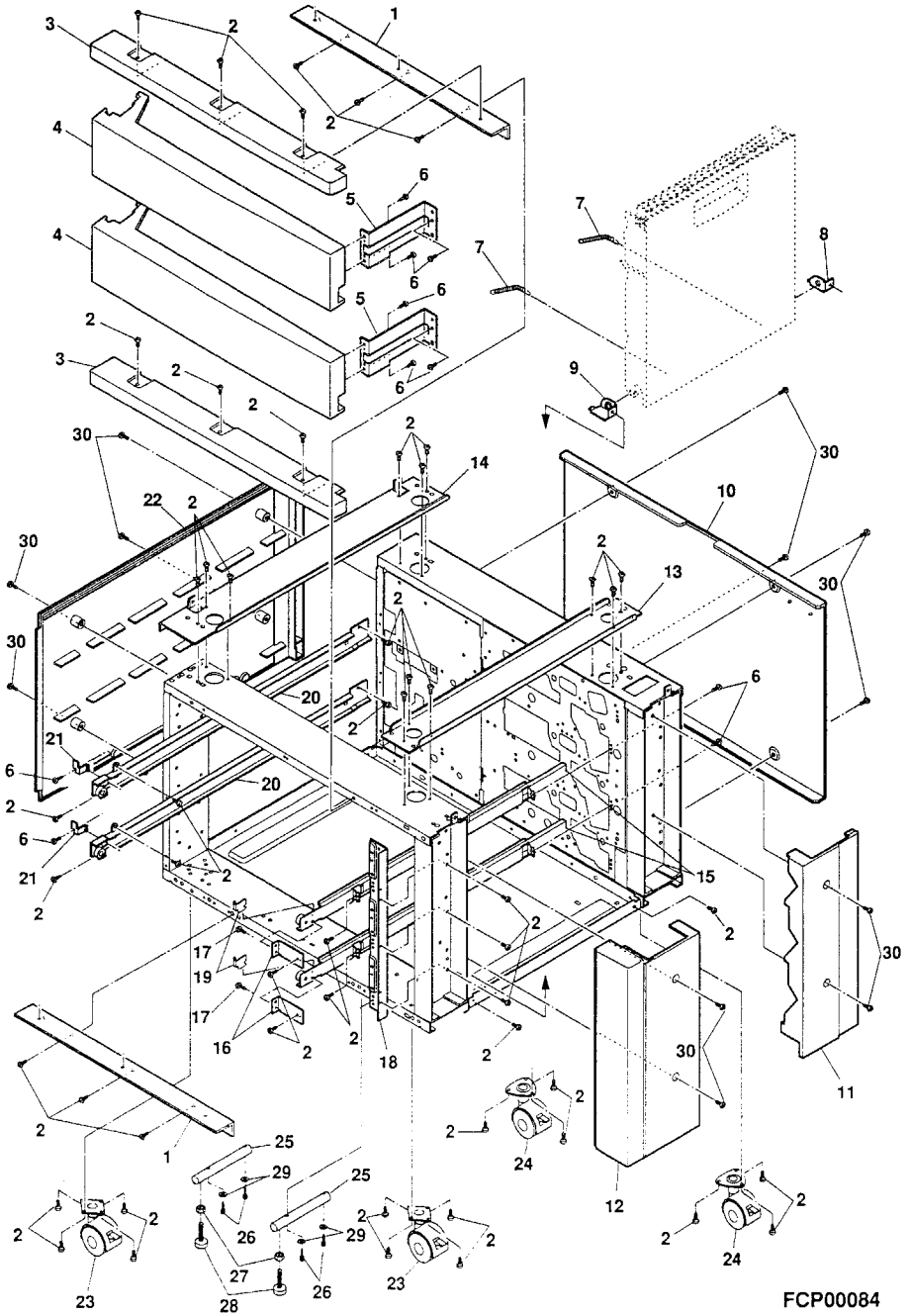
3 SF-D19,D19H,D20‥リフトアップユニット(SF-D19,D19H,D20‥Lift up unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	CPWBF0936FC31	AP	EQ	N	E	Cassette size detect PWB 1.2	カセットサイズケンチキバン 1.2
2	CPWBF0940FC31	AS	FG	N	E	Lift up motor PWB	リフトUPモーターキバン
	ユニット (Unit)						
901	DUNTM6554FCZZ	BF	HG	N	E	Lift up unit	リフトアップユニット

4 SF-D20‥デスク外装(SF-D20‥Desk exteriors)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPLTM4115FCZZ	AK	EB	N	C	Front cover fixing plate	フロントカバートリツケイタ
2	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
3	PCOVP1125FCZZ	AQ	EZ	N	C	Front cover	フロントカバーB9
4	GCAB-0759FCZZ	AU	FQ	N	D	Cassette exterior	カクシガイソウカセット
5	LPLTM4117FCZZ	AF	DS	N	C	Cassette exterior fixing plate	カクシガイソウトリツケイタDS
6	LX-BZ0180FCZZ	AA	DD		C	Screw	ビス
7	MSPRC1981FCZZ	AB	DD	N	C	Transport guide release spring	ハンソウガイドカイヘイスプリング
8	LPLTM4084FCZZ	AD	DJ	N	C	Transport guide fulcrum plate R	ハンソウガイドシテンプレートR
9	LPLTM4083FCZZ	AD	DJ	N	C	Transport guide fulcrum plate F	ハンソウガイドシテンプレートF
10	GCAB-0757FCZZ	AY	GD	N	D	Exterior Rear	ガイソウ ウシロ
11	GCAB-0758FCZZ	AR	EZ	N	D	Exterior RR	ガイソウR R
12	GCAB-0755FCZZ	AW	FX	N	D	Exterior RF	ガイソウR F
13	LSTYM0186FCZZ	AN	EQ	N	C	Stay right	ヨコステイ ミギ
14	LSTYM0185FCZZ	AQ	EZ	N	C	Stay left	ヨコステイ ヒダリ
15	CRALM0106FC01	AR	EZ	N	C	Drawer rail R	ヒキダンレールR
16	LPLTM4077FCZZ	AE	DS	N	C	Rail sub plate	レールホジョバン
17	LX-BZ7025XCZZ	AB	DD		C	Screw (4×6)	ビス
18	LPLTM4075FCZZ	AL	EG	N	C	Pipe sub plate	シチュウホジョプレート
19	LSTPP0281FCZZ	AC	DD	N	C	Drawer stopper	UNヒキダンストッパー Rショ
20	CRALM0105FC01	AR	EZ	N	C	Drawer rail L	ヒキダンレールL
21	LSTPF0282FCZZ	AE	DJ	N	C	Casstte stopper	カセットレールストッパーDSK
22	GCAB-0756FCZZ	BB	GJ	N	D	Exterior L	ガイソウL
23	GLEGM0046FCZZ	AP	EQ		C	Caster F	キャスターF
24	GLEGM0047FCZZ	AP	EQ		C	Caster R	キャスターR
25	LPLTM4125FCZZ	AP	EQ	N	C	Adjuster fixing plate	アジャスタートリツケイタ
26	XXHSP40L25000	AB	DD		C	Screw (4×25)	ビス
27	XNESD80-65000	AA	DD		C	Nut	ナット
28	PAJS-0009FCZZ	AD	DJ		C	Adjuster N	アジャスター N
29	XWHSD40-08100	AA	DD		C	Washer	ワッシャー
30	XBBSC40P08000	AA	DD		C	Screw (4×8)	ビス

4 SF-D20‥デスク外装(SF-D20‥Desk exteriors)



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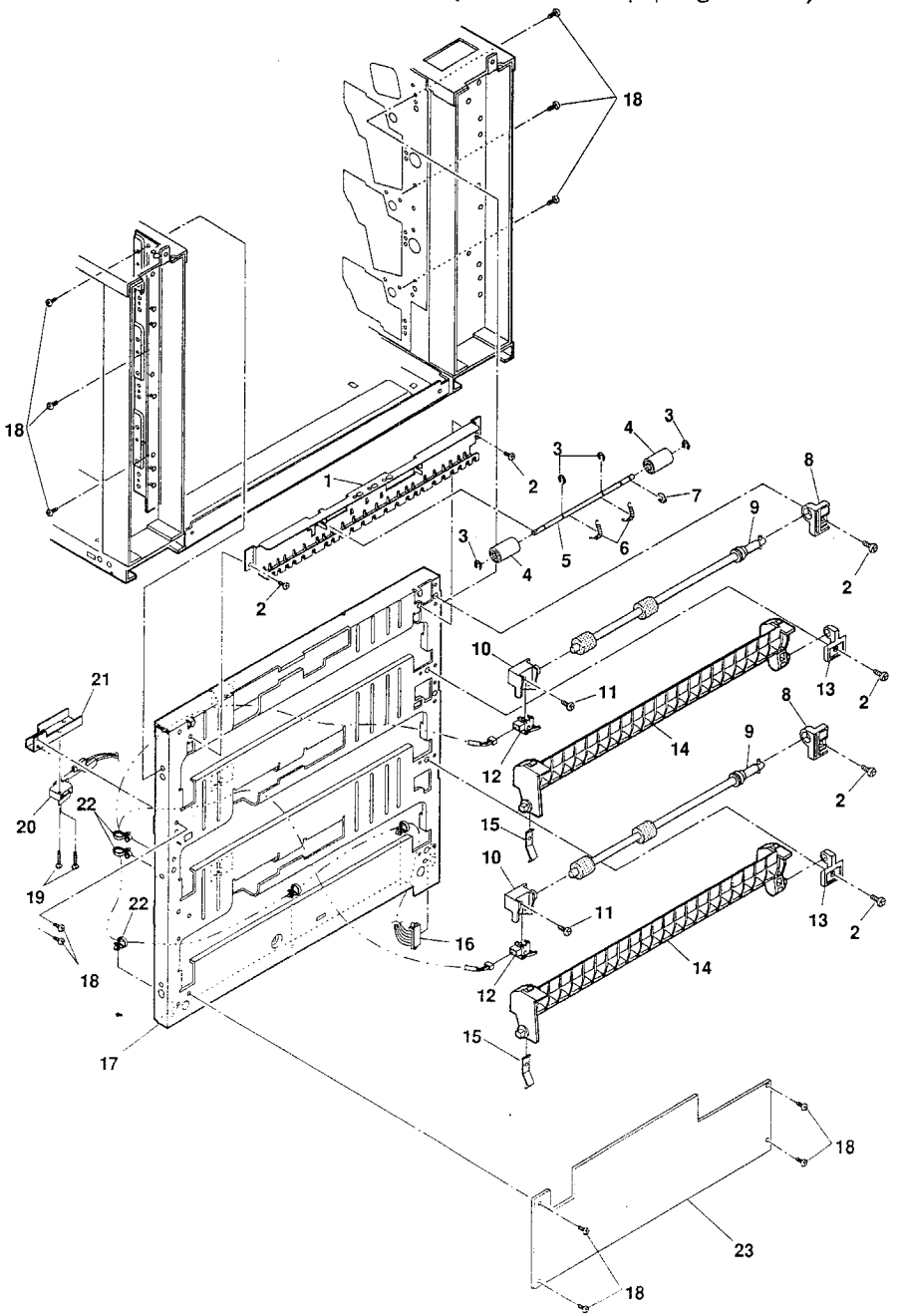
55 SF-D20‥デスクペーパーガイドユニット(SF-D20‥Desk paper guide unit)



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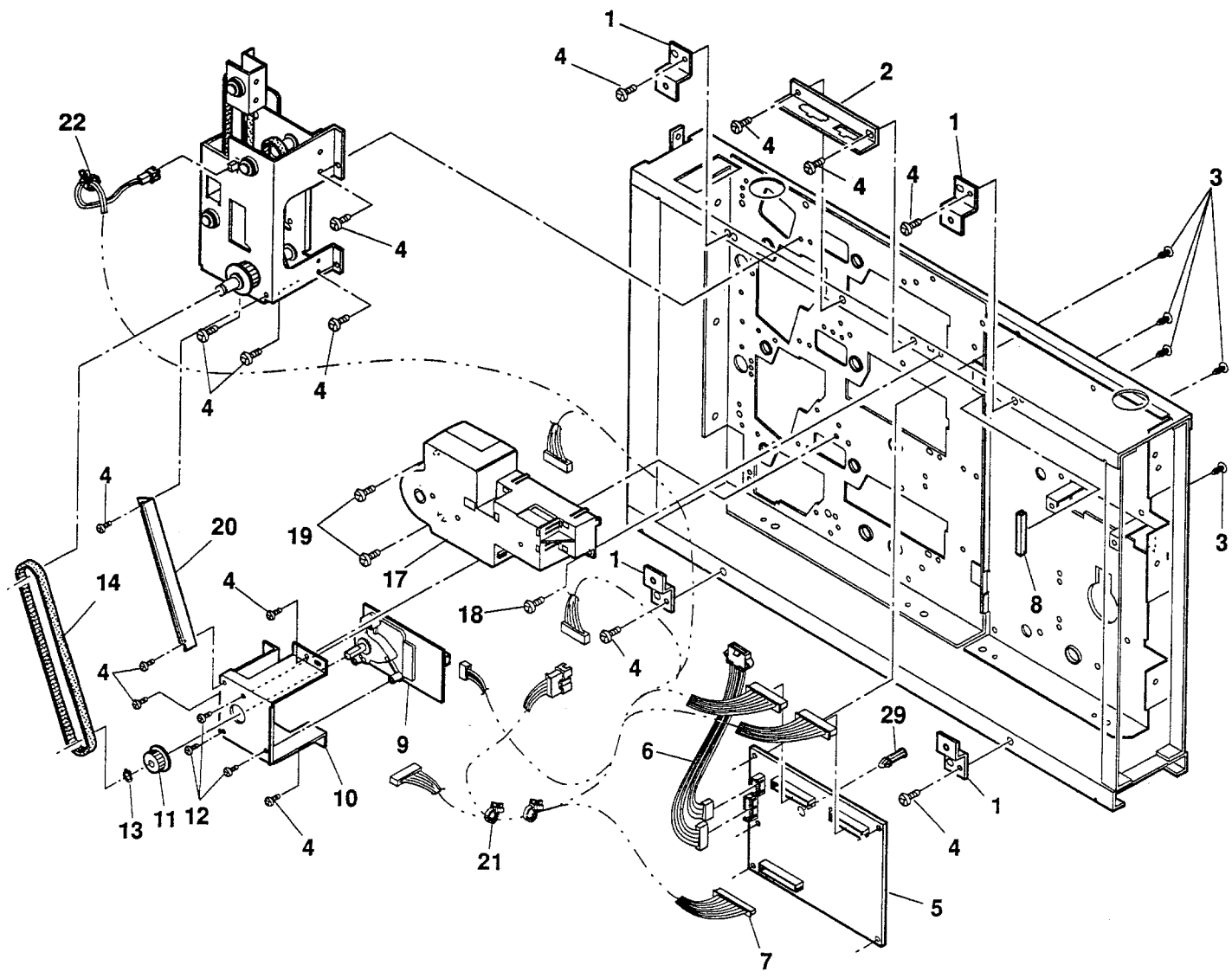
55 SF-D20‥デスクペーパーガイドユニット(SF-D20‥Desk paper guide unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PGiDH1367FCZZ	AM	EG	N	C	Paper guide 2	ペーパガイド2
2	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
3	XRESP50-06000	AA	DD		C	E type ring	Eリング
4	NROLP0896FCZZ	AC	DD	N	C	Transport roller	ハンソウジュウドウローラー
5	NSFTZ1775FCZZ	AK	EB	N	C	Transport shaft	ハンソウジュウドウジク
6	MSPRT1960FCZZ	AA	DD	N	C	Transport spring	ハンソウジュウドウスプリング
7	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
8	LHLDZ1103FCZZ	AD	DJ	N	C	Roller holder R	ローラーホルダーR
9	CROLR0938FC01	AR	EZ	N	C	Transport roller	ハンソウローラーH9B
10	LHLDZ1082FCZZ	AC	DJ	N	C	Roller holder FB	ローラーホルダーFB
11	XBPSD40P18000	AA	DD		C	Screw (4×18)	ビス
12	QSW-L0443FCZZ	AM	EG	N	B	Lead switch (PID1)	リードスイッチ
13	LHLDZ1081FCZZ	AC	DJ	N	C	U-turn paper guide holder L	UターンペーパーガイドホルダL
14	PGiDM1340FCZZ	AM	EG	N	C	U-turn paper guide A	Uターンペーパーガイド-A
15	MSPRT1939FCZZ	AB	DD	N	C	U-turn paper guide spring	Uターンペーパーガイドスプリング
16	DHAi-2029FCZZ	AQ	EQ	N	C	Transport interface harness (SF-D20,SF-D21)	ハンソウセツゾクケイハーネス
17	PGiDH1366FCZZ	AY	FX	N	C	Paper guide 1	ペーパガイド1
18	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
19	XBPSD30P12000	AA	DD		C	Screw (3×12)	ビス
20	QSW-M0319FCZZ	AG	DS		B	Door switch	ドアースイッチ
21	LPLTM4126FCZZ	AH	DX	N	C	Transport guide switch fixing plate	ハンソウガイドSWトリツケイタ
22	LBNDJ0013FCZZ	AA	DD		C	Wire band	コンベックス
23	PCOVP1150FCZZ	AL	EG	N	C	Paper guide cover (SF-D20,SF-D21)	ペーパーガイドカバー

56 SF-D20‥デスク後フレーム(SF-D20‥Desk rear frame)

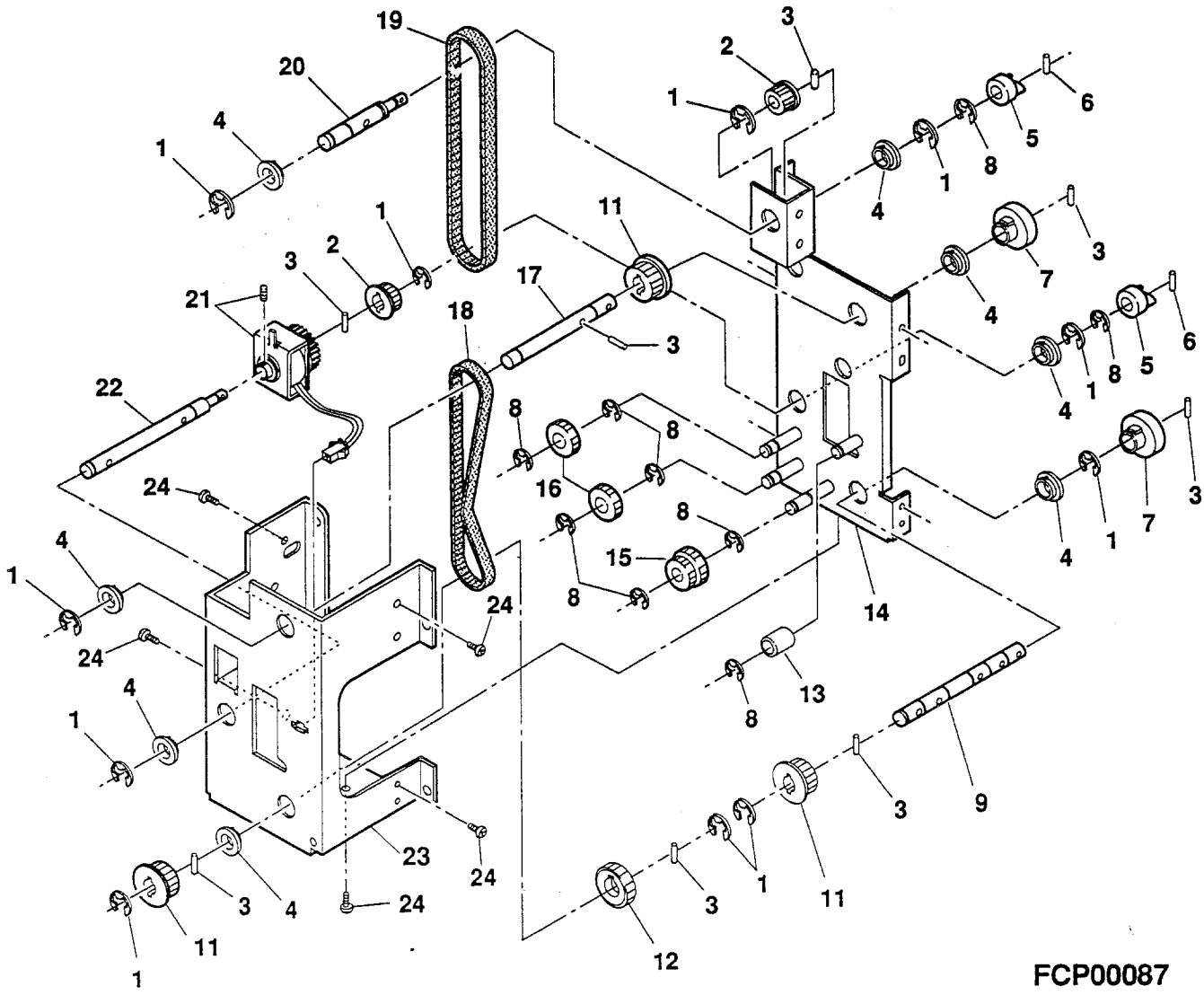
NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPLTM4118FCZZ	AE	DS	N	C	Rear exterior fixing plate	ウシロガイソウトリツケイタ
2	LPLTM4101FCZZ	AD	DJ	N	C	Harness fixing plate DSK	ハーネストリツケイタDSK
3	LHLDW2126SCZZ	AB	DD		C	Holder (KGLS-8RT)	ホルダー
4	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
5	CPWBF0938FC51	BQ	MP	N	E	Desk main PWB	デスクメインキバン
6	DHAi-2031FCZZ	AP	EQ	N	C	Body interface harness	ホンタイチュウケイハーネス
7	DHAi-2032FCZZ	AY	GD	N	C	Main harness (SF-D20)	メインハーネス 2カセ
8	LBSHC0164FCZZ	AB	DD		C	Bushing	ブッシング
9	RMOTP0692FCZZ	BP	MB	N	B	Main motor	メインモーター
10	LPLTM4080FCZZ	AL	EB	N	C	Main motor fixing plate	MMトリツケバン
11	NPLYZ0264FCZZ	AC	DJ	N	C	Main motor pulley	MMプーリー
12	LX-BZ0180FCZZ	AA	DD		C	Screw (4×10)	ビス
13	LX-WZ0077FCZZ	AA	DD		C	Stop ring (G8)	ストップリング
14	NBLTH0194FCZZ	AK	EB	N	B	Belt (S3M363) (SF-D20,SF-D21)	ベルト(S3M363)
17	DUNTM6554FCZZ	BF	HG	N	E	Lift up unit	リフトアップユニット
18	XBBSD40P10000	AA	DD		C	Screw (4×10)	ビス
19	XBBSD40P30000	AA	DD		C	Screw (4×30)	ビス
20	LSTYM0187FCZZ	AF	DS	N	C	Main motor fixing stay A (SF-D20,SF-D21)	MMトリツケステー A
21	LBNDJ0043FCZZ	AA	DD		C	Band (SG-130)	スナップバンド
22	LBNDJ0013FCZZ	AA	DD		C	Wire band	コンベックス
29	LSUPP0077FCZZ	AB	DD	N	C	PWB supporter	キバンサポーター

56 SF-D20‥デスク後フレーム(SF-D20‥Desk rear frame)

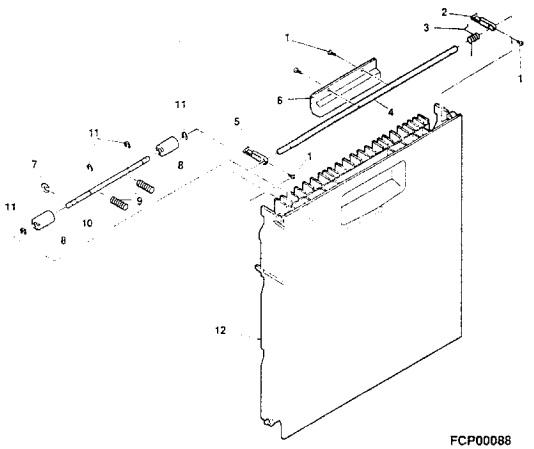


57 SF-D20・・デスク駆動ボックス上ユニット(SF-D20・・Desk drive box upper unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP70-08000	AA	DD		C	E type ring	Eリング
2	NPLYZ0265FCZZ	AC	DD	N	C	Transport pulley	ハンソウプーリー
3	LPiNS0075FCZZ	AB	DD		C	Pin (φ3-10)	ヘンコウピン
4	NBRGC2019SCZZ	AC	DJ		B	Bearing (φ8)	ベアリング
5	NCPL-0014FCZZ	AC	DJ	N	C	Transport cup ring	ハンソウカップリング
6	LPiNS0134FCZZ	AB	DD		C	Pin (φ2-12)	ヘイコウピン
7	NCPL-0013FCZZ	AC	DD	N	C	Paper feeding cup ring	キュウシカップリング
8	XRESP50-06000	AA	DD		C	E type ring	Eリング
9	NSFTZ1786FCZZ	AL	EG	N	C	25 Pulley shaft center	25プーリジク ナカ
11	NPLYZ0266FCZZ	AC	DJ	N	C	Paper feeding joint pulley	キュウシレンケツプーリー
12	NGERH0457FCZZ	AC	DD		C	DV drive gear R	DVクドウギヤー R
13	NROLP0916FCZZ	AB	DD	N	C	Paper feeding belt guide roller	キュシベルトガイドローラー
14	CPLTM4078FC01	AQ	EZ	N	C	Drive box A	クドウボックスA
15	NGERH0869FCZZ	AC	DD	N	C	22/20T gear	22/20Tギヤー
16	NGERH0870FCZZ	AC	DD	N	C	18T gear	18Tギヤ
17	NSFTZ1785FCZZ	AH	DX	N	C	25 Pulley shaft upper	25プーリジク ウエ
18	NBLTH0193FCZZ	AH	DX	N	B	Belt (S3M300)	ベルト(S3M300)
19	NBLTH0192FCZZ	AH	DX	N	B	Belt (S2M285)	ベルト(S2M285)
20	NSFTZ1782FCZZ	AB	DD	N	C	16 Pulley shaft upper	16プーリジク ウエ
21	PCLC-0210FCZZ	AW	FQ	N	C	Transport clutch	ハンソウクラッチ
22	NSFTZ1781FCZZ	AL	EB	N	C	16 Pulley shaft center	16プーリジク ナカ
23	LPLTM4079FCZZ	AP	EQ	N	C	Drive box B	クドウボックス B
24	XHPSD40P10000	AA	DD		C	Screw (4×10)	ビス



8 SF-D20‥デスク搬送ガイドユニット(SF-D20‥Desk transport guide unit)



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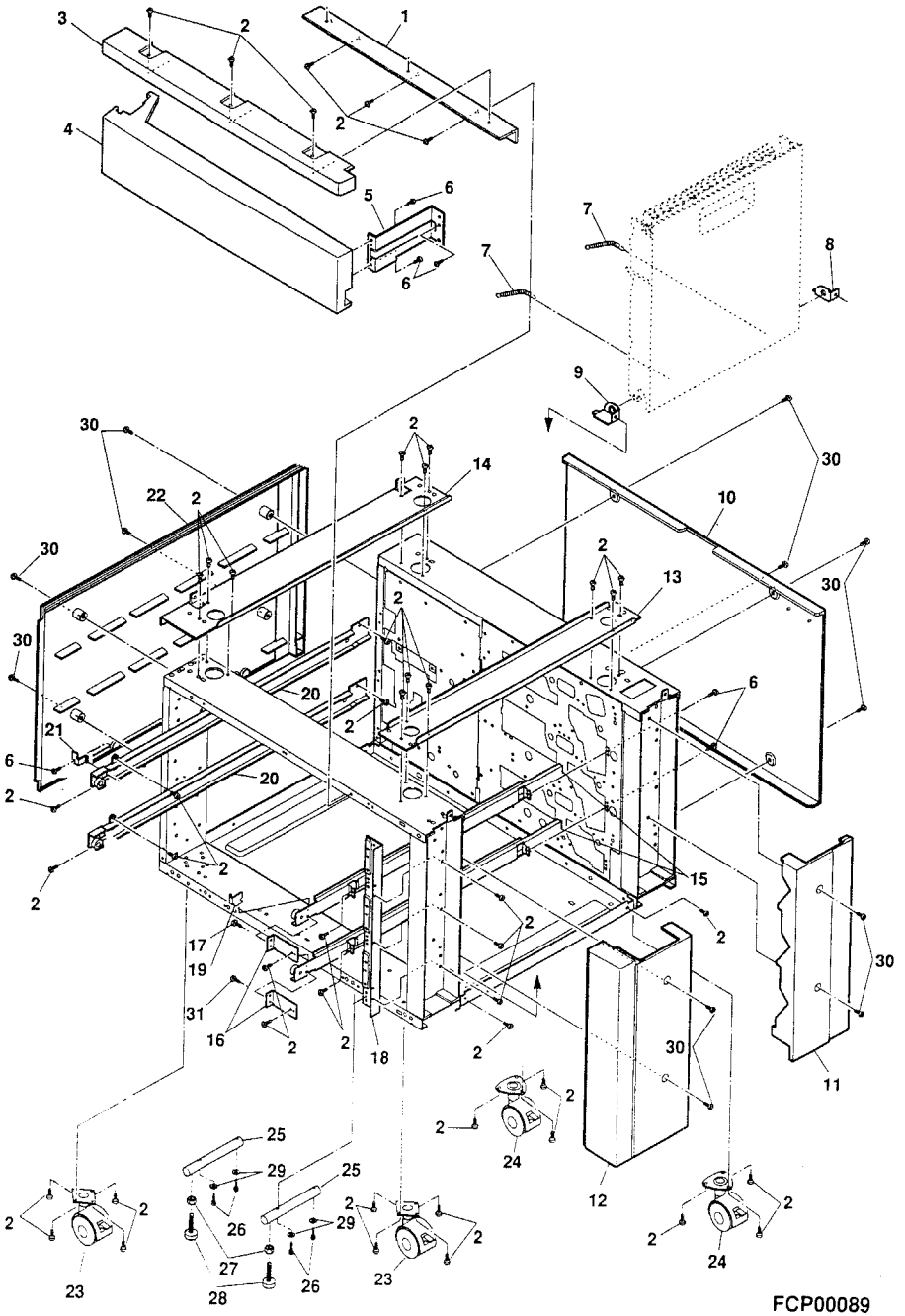
8 SF-D20‥デスク搬送ガイドユニット(SF-D20‥Desk transport guide unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XBBSD30P06000	AA	DD		C	Screw (3×6)	ビス
2	MLEVP0608FCZZ	AE	DJ	N	C	Guide lock lever R	ガイドロックレバーR
3	MSPRD1949FCZZ	AB	DD	N	C	Guide lock release spring	ガイドロックカイジョスプリング
4	NSFTZ1735FCZZ	AN	EG	N	C	Guide lock release shaft	ガイドロックカイジョジク
5	MLEVP0598FCZZ	AE	DJ	N	C	Guide lock lever	ガイドロックレバー
6	MLEVP0595FCZZ	AF	DS	N	C	Guide lock release lever	ガイドロックカイジョレバー
7	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
8	NROLP0896FCZZ	AC	DD	N	C	Transport roller	ハンソウジュウドウローラー
9	MSPRC1948FCZZ	AB	DD	N	C	Roller pressure spring	ローラーアッセツスプリング
10	NSFTZ1775FCZZ	AK	EB	N	C	Transport shaft	ハンソウジュウドウジク
11	XRESP50-06000	AA	DD		C	E type ring	Eリング
12	PGIDM1365FCZZ	BC	GT	N	C	Transport guide	ハンソウガイド

9 SF-D21‥デスク外装(SF-D21‥Desk exteriors)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPLTM4115FCZZ	AK	EB	N	C	Front cover fixing plate	フロントカバートリツケイタ
2	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
3	PCOVP1125FCZZ	AQ	EZ	N	C	Front cover	フロントカバーB9
4	GCAB-0759FCZZ	AU	FQ	N	D	Cassette exterior	カクシガイソウカセット
5	LPLTM4117FCZZ	AF	DS	N	C	Cassette exterior fixing plate	カクシガイソウトリツケイタDS
6	LX-BZ0180FCZZ	AA	DD		C	Screw	ビス
7	MSPRC1981FCZZ	AB	DD	N	C	Transport guide release spring	ハンソウガイドカイヘイスプリング
8	LPLTM4084FCZZ	AD	DJ	N	C	Transport guide fulcrum plate R	ハンソウガイドシテンプレートR
9	LPLTM4083FCZZ	AD	DJ	N	C	Transport guide fulcrum plate F	ハンソウガイドシテンプレートF
10	GCAB-0757FCZZ	AY	GD	N	D	Exterior Rear	ガイソウ ウシロ
11	GCAB-0758FCZZ	AR	EZ	N	D	Exterior RR	ガイソウR R
12	GCAB-0755FCZZ	AW	FX	N	D	Exterior RF	ガイソウR F
13	LSTYM0186FCZZ	AN	EQ	N	C	Stay right	ヨコステイ ミギ
14	LSTYM0185FCZZ	AQ	EZ	N	C	Stay left	ヨコステイ ヒダリ
15	CRALM0106FC01	AR	EZ	N	C	Drawer rail R	ヒキダシレールR
16	LPLTM4077FCZZ	AE	DS	N	C	Rail sub plate	レールホジョバン
17	LX-BZ7025XCZZ	AB	DD		C	Screw (4×6)	ビス
18	LPLTM4075FCZZ	AL	EG	N	C	Pipe sub plate	シチュウホジョプレート
19	LSTPP0281FCZZ	AC	DD	N	C	Drawer stopper	UNヒキダシストッパー RンヨU
20	CRALM0105FC01	AR	EZ	N	C	Drawer rail L	ヒキダシレールL
21	LSTPF0282FCZZ	AE	DJ	N	C	Casstte stopper	ウセットレールストッパーDSK
22	GCAB-0756FCZZ	BB	GJ	N	D	Exterior L	ガイソウL
23	GLEGM0046FCZZ	AP	EQ		C	Caster F	キャスターF
24	GLEGM0047FCZZ	AP	EQ		C	Caster R	キャスターR
25	LPLTM4125FCZZ	AP	EQ	N	C	Adjuster fixing plate	アジャスタートリツケイタ
26	XXHSP40L25000	AB	DD		C	Screw (4×25)	ビス
27	XNESD80-65000	AA	DD		C	Nut	ナット
28	PAJS-0009FCZZ	AD	DJ		C	Adjuster N	アジャスターN
29	XWHSD40-08100	AA	DD		C	Washer	ワッシャ
30	XBBSC40P08000	AA	DD		C	Screw (4×8)	ビス
31	LX-BZ0465FCZZ	AA	DD		C	Screw (SF-D21)	ビス

59 SF-D21‥デスク外装(SF-D21‥Desk exteriors)



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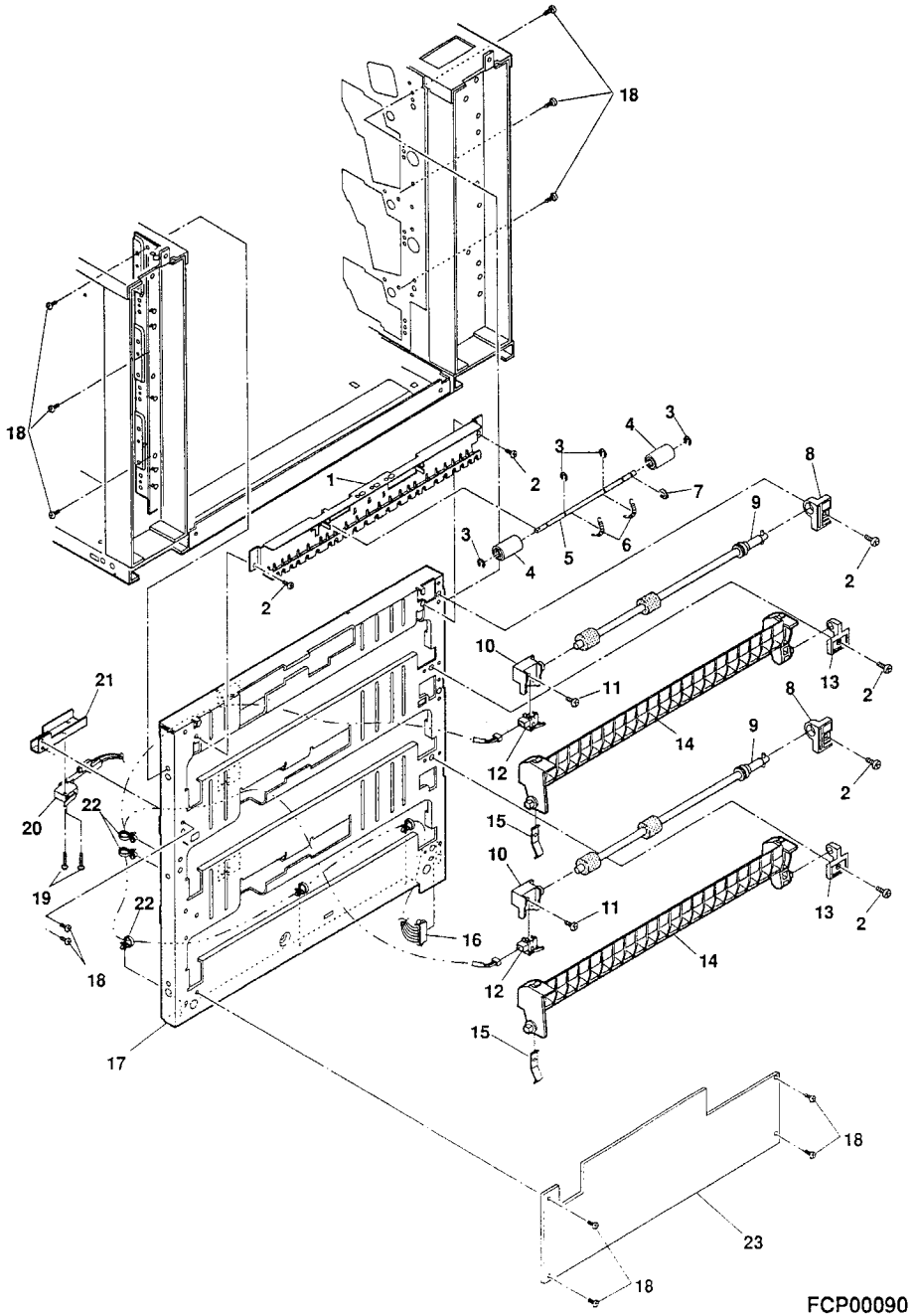
60 SF-D21‥デスクペーパーガイドユニット(SF-D21‥Desk paper guide unit)



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60 SF-D21‥デスクペーパーガイドユニット(SF-D21‥Desk paper guide unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PGiDH1367FCZZ	AM	EG	N	C	Paper guide 2	ペーパガイド2
2	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
3	XRESP50-06000	AA	DD		C	E type ring	Eリング
4	NROLP0896FCZZ	AC	DD	N	C	Transport roller	ハンソウジュウドウローラー
5	NSFTZ1775FCZZ	AK	EB	N	C	Transport shaft	ハンソウジュウドウジク
6	MSPRT1960FCZZ	AA	DD	N	C	Transport spring	ハンソウジュウドウスプリング
7	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
8	LHLDZ1103FCZZ	AD	DJ	N	C	Roller holder R	ローラーホルダーR
9	CROLR0938FC01	AR	EZ	N	C	Transport roller	ハンソウローラーB9B
10	LHLDZ1082FCZZ	AC	DJ	N	C	Roller holder FB	ローラーホルダーFB
11	XBPSD40P18000	AA	DD		C	Screw (4×18)	ビス
12	QSW-L0443FCZZ	AM	EG	N	B	Lead switch (PID1)	リードスイッチ
13	LHLDZ1081FCZZ	AC	DJ	N	C	U-turn paper guide holder L	UターンペーパーガイドホルダL
14	PGiDM1340FCZZ	AM	EG	N	C	U-turn paper guide A	Uターンペーパーガイド-A
15	MSPRT1939FCZZ	AB	DD	N	C	U-turn paper guide spring	Uターンペーパーガイドスプリング
16	DHAi-2029FCZZ	AQ	EQ	N	C	Transport interface harness (SF-D20,SF-D21)	ハンソウチュウケイハーネス
17	PGiDH1366FCZZ	AY	FX	N	C	Paper guide 1	ペーパガイド1
18	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
19	XBPSD30P12000	AA	DD		C	Screw (3×12)	ビス
20	QSW-M0319FCZZ	AG	DS		B	Door switch	ドアースイッチ
21	LPLTM4126FCZZ	AH	DX	N	C	Transport guide switch fixing plate	ハンソウガイドSWトリツケイタ
22	LBNDJ0013FCZZ	AA	DD		C	Wire band	コンベックス
23	PCOVP1150FCZZ	AL	EG	N	C	Paper guide cover (SF-D20,SF-D21)	ペーパーガイドカバー

61 SF-D21‥デスク後フレーム(SF-D21‥Desk rear frame)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPLTM4118FCZZ	AE	DS	N	C	Rear exterior fixing plate	ウシロガイソウトリツケイタ
2	LPLTM4101FCZZ	AD	DJ	N	C	Harness fixing plate DSK	ハーネストリツケイタDSK
3	LHLDW2126SCZZ	AB	DD		C	Holder (KGLS-8RT)	ホルダー
4	XHBSE40P10000	AA	DD		C	Screw (4×10)	ビス
5	CPWBF0938FC51	BQ	MP	N	E	Desk main PWB	デスクメインキバン
6	DHAi-2031FCZZ	AP	EQ	N	C	Body interface harness	ホンタイチュウケイハーネス
7	DHAi-2033FCZZ	BA	GJ	N	C	Main harness (SF-D21)	メインハーネス LCC
8	LBSHC0164FCZZ	AB	DD		C	Bushing	ブッシング
9	RMOTP0692FCZZ	BP	MB	N	B	Main motor	メインモーター
10	LPLTM4080FCZZ	AL	EB	N	C	Main motor fixing plate	MMトリツケバン
11	NPLYZ0264FCZZ	AC	DJ	N	C	Main motor pulley	MMプーリー
12	LX-BZ0180FCZZ	AA	DD		C	Screw (4×10)	ビス
13	LX-WZ0077FCZZ	AA	DD		C	Stop ring (G8)	ストップリング
14	NBLTH0194FCZZ	AK	EB	N	B	Belt (S3M363) (SF-D20,SF-D21)	ベルト(S3M363)
20	LSTYM0187FCZZ	AF	DS	N	C	Main motor fixing stay A (SF-D20,SF-D21)	MMトリツケステー A
21	LBNDJ0043FCZZ	AA	DD		C	Band (SG-130)	スナップバンド
22	LBNDJ0013FCZZ	AA	DD		C	Wire band	コンベックス
24	MSPRC1975FCZZ	AA	DD	N	C	Size PWB fixing spring (SF-D21)	サイズキバントリツケスプリング
25	CPWBF0936FC31	AP	EQ	N	E	Cassette size detect PWB 1,2 (SF-D21)	カセットサイズケンチキバン1,2
26	LX-BZ0663FCZZ	AD	DJ		C	Screw (SF-D21)	ビス
27	LX-BZ0536FCZZ	AB	DD		C	Screw (SF-D21)	ビス
28	LPLTM4076FCZZ	AE	DJ	N	C	Drawer connector fixing plate (SF-D21)	ドロアーコネクタートリツケイタ
29	LSUPP0077FCZZ	AB	DD	N	C	PWB supporter	キバンサポーター

12 光学ユニット(Optical unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	VHPGP3A39//-1	AH	DX		B	Photo transistor (GP3A39)	フォトトランジスター
2	LPLTM4052FCZZ	AB	DD	N	C	MHP fixing plate	MHPコテイバン B9
3	XRESP70-08000	AA	DD		C	E type ring	Eリング
4	NBRGC0387FCZZ	AB	DD		B	Bearing	ベアリング
5	RMOTP0695FCZZ	BG	HL	N	B	Mirror motor	ミラーモーターB9
6	LPLTM4053FCZZ	AK	EB	N	C	Mirror motor fixing plate	ミラーモーターコテイバン
7	XXXSP40L04000	AA	DD		C	Screw (4×4)	ムシビス
8	NGERH0860FCZZ	AN	EG	N	C	Winder drive gear	マキトリクドウギヤ
9	LPLTM4048FCZZ	AH	DX	N	C	Tip sheet fixing plate	センタンシートトリツケイタ
10	LPLTM4109FCZZ	AE	DS	N	C	Rear exterior fixing plate	ウシロキッピトリツケイタ
11	LX-BZ0266FCZZ	AB	DD		C	Screw	ビス
12	LRALM0101FCZZ	AM	EG	N	C	MB-B rail	MB-Bレール B9
13	PGUMS0228FCZZ	AA	DD	N	C	Table glass rubber	テーブルガラスゴム
14	PGUMS0147FCZZ	AA	DD		C	Table glass rubber (small)	テーブルガラスゴム(ショウ)
15	PGUMS0174FCZZ	AB	DD		C	Table glass rubber (large)	テーブルガラスゴム(ダイ)
16	LX-BZ0637FCZZ	AC	DJ		C	Screw (Red)	6ミラーチョウセイビス
17	LX-WZ0057FCZZ	AA	DD		C	Wasner	ナミワッシャ
18	XWHSD40-08000	AA	DD		C	Washer	ワッシャ
19	XNESD40-32000	AA	DD		C	Nut	ナット
20	LX-BZ0335FCZZ	AA	DD		C	Screw (4×6)(Red)	ビス
21	NBRGC0254FCZZ	AB	DD		C	Delivery roller bearing	ハイシローラーヨウジクウケ
23	PDUC-0062FCZZ	AF	DS	N	C	MC air duct	MCエアーダクトB
25	LPLTP4025FCZZ	AK	EB	N	C	ORS PWB fixing plate (SF-2022･･Japan only)(SF-2027)	ジュコウキバントリツケイタ
26	CPWBF0935FC31	AX	FX	N	E	ORS light receiving PWB (Japan only)	ORSジュコウキバンJ
	CPWBF0935FC32	AX	FX	N	E	ORS light receiving PWB (Export) (SF-2027)	ORSジュコウキバン
27	XEPSD40P06000	AA	DD		C	Screw (4×6)(SF-2022･･Japan only)(SF-2027)	ビス
28	CCOVP1132FC31	AX	FX	N	E	Dark bok cover lower unit	アンパコカバーシタユニット
29	XBTSF40P04000	AA	DD		C	Screw (4×4)	ビス
30	XBPSD30P04K00	AA	DD		C	Screw (3×4K)	ビス
31	RMOTP0696FCZZ	AV	FQ	N	B	Lens motor	レンズモーター
32	PMIR-0099FCZZ	AS	FG	N	B	6th mirror	ダイ6ミラー B9
33	LFIX-0320FCZZ	AB	DD		C	6th mirror fixing plate	ダイ6ミラーオサエ
34	LPLTM4046FCZZ	AD	DJ	N	C	Glass holding plate R	B9ガラスウケイタR
35	LPLTM4047FCZZ	AD	DJ	N	C	Glass holding plate L	B9ガラスウケイタL
36	VHPGP1A22LC-1	AK	EB		B	Photo transistor (GP1A22LC)	フォトトランジスター
37	PDUC-0061FCZZ	AM	EG	N	C	CFM duct	CFMダクト
38	RMOTE0630FCZZ	AW	FX		B	Main motor(cooling)	メインモーター(レイキャク)
39	XEPSD40P30000	AA	DD		C	Screw (4×30)	ビス
40	PFILD0186FCZZ	AF	DS	N	C	Fan filter	ファンフィルター
41	XBPSD40P06K00	AA	DD		C	Screw (4×6K)	ビス
42	PGIDM1343FCZZ	AC	DJ	N	C	Wire guide	ワイヤーガイド
43	NPLYZ0167FCZZ	AF	DS		C	Pulley	プーリー
44	PWIR-0147FCZZ	AP	EQ	N	C	MB drive wire	MBクドウワイヤー
45	NPLYZ0172FCZ1	AL	EB		C	Winder pulley DN	マキトリプーリーD N
46	LX-BZ0049FCZZ	AB	DD		B	Screw (4×6)	ビス
47	NSFTZ1763FCZZ	AR	EZ	N	C	Winder drive shaft	マキトリクドウジク
48	NPLYZ0181FCZZ	AB	DD		C	CL pulley	CLプーリー
49	LHLDZ1086FCZZ	AD	DJ	N	C	CL lead holder	CLリードホルダー
50	LPLTM4050FCZZ	AD	DJ	N	C	Wire adjusting plate	ワイヤーチョウセイバン
51	XBPSD40P25000	AA	DD		C	Screw (4×25)	ビス
52	XBPSD40P12KS0	AA	DD		C	Screw (4×12KS)	ビス
53	LPLTM4054FCZZ	AB	DD	N	C	Wire fixing plate	ワイヤーコテイバン
54	LHLDZ1098FCZZ	AD	DJ	N	C	Dustproof collar holder	ボウジンコロホルダー
55	PCLR-0368FCZZ	AB	DD	N	C	Dustproof collar	ボウジンコロB9
56	PCOVP1131FCZZ	AT	FG	N	C	Dark box cover upper	アンパコカバーウエ
57	PSHEZ3132FCZZ	AG	DX	N	C	Lens upper sheet	B9レンズウエシート
58	PLNS-0043FCZZ	BG	HL		B	Lens	レンズ
59	XRESP30-04000	AA	DD		C	E type ring	Eリング
60	NBRGC2029SCZZ	AB	DD		C	Bearing (F3×6×4.7×1)	ベアリング
61	PSHEP2751FCZZ	AC	DD		C	Lens shield sheet	LNSシャコウシートヨコ
62	PSHEP2335FCZZ	AA	DD		C	Shield sheet	ヒカリシャコウシート
63	PSHEG2817FCZ1	AC	DJ		C	Lens lock sheet	レンズロックシート
64	PWIR-0145FCZZ	AM	EG	N	C	Lens drive wire	レンズクドウワイヤー
65	MSPRC1289FCZZ	AA	DD		C	Drive wire spring	クドウワイヤースプリング
66	LX-BZ0660FCZZ	AC	DJ	N	C	Screw	ビス
67	NPLYZ0263FCZZ	AB	DD	N	C	S idle pulley	Sアイドルプーリー
68	LPLTM4049FCZZ	AC	DJ	N	C	Lens drive shaft plate	レンズクドウジクイタ
69	LPLTM3732FCZZ	AC	DJ		C	LHP control plate	LHPケンシュツバン
70	XEPSF30P05000	AB	DD	N	C	Screw (3×5)	ビス
71	XRESP50-06000	AA	DD		C	E type ring	Eリング
72	NPLYZ0262FCZZ	AF	DS	N	C	Lens drive pulley	レンズクドウプーリー
73	LBOSZ1410FCZZ	AE	DS	N	C	Lens drive pulley boss	LNSクドウプーリーボス
74	NSFTZ1761FCZZ	AN	EG	N	C	Lens drive shaft	レンズクドウジク
75	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
76	XBPSD40P06KS0	AA	DD		C	Screw (4×6KS)	ビス
77	VHPGP1A71A1-1	AG	DX		B	Photo transistor (GP1A71A1)	フォトトランジスター
78	PHOG-0385FCZZ	AB	DD	N	C	Harness clamp	ハーネスクランプ
79	XBPSD40P12K00	AA	DD		C	Screw (4×12K)	ビス
80	XBBSD40P10000	AA	DD		C	Screw (4×10)	ビス
81	XBPSD30P06KS0	AA	DD		C	Screw (3×6K)	ビス

SF2027

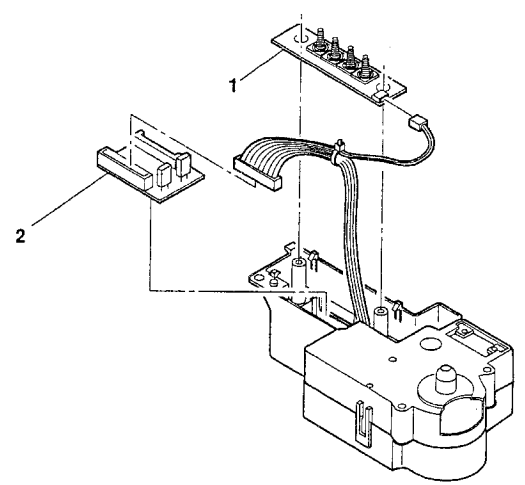
12 光学ユニット(Optical unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
82	LX-BZ0586FCZZ	AA	DD		C	Screw	ビス
83	LX-BZ0324FCZZ	AA	DD		C	Screw	ビス
84	LX-BZ0266FCZZ	AB	DD		C	Screw	ビス
85	PSHEZ3182FCZZ	AA	DD	N	C	Reflector sheet F	ハンシャボウシート F
86	PSHEZ3183FCZZ	AA	DD	N	C	Reflector sheet R	ハンシャボウシート R
87	PSHEZ3142FCZZ	AB	DD	N	C	6th mirror shield sheet	ダイ6ミラーカバー
88	LBSHC0247FCZZ	AB	DD		C	Bushing (SG-12)	DVヨウブッシング
89	CREFL0145FC31	BN	LP	N	E	Copy lamp unit (100V series)	コピーランプユニット
	CREFL0145FC32	BN	LP	N	E	Copy lamp unit (200V series)	コピーランプユニット
90	LPLTM4153FCZZ	AD	DJ	N	C	Panel hold plate left	パネルシバンヒダリ
91	LPLTM4154FCZZ	AC	DJ	N	C	Panel hold plate right	パネルシバンミギ

13 リフトアップユニット(Lift up unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	CPWBF0936FC31	AP	EQ	N	E	Cassette size sensor PWB 1,2	カセットサイズケンチキバン 1,2
2	CPWBF0940FC31	AS	FG	N	E	Lift up motor PWB	リフトUPモーターキバン
	ユニット (Unit)						
901	DUNTM6554FCZZ	BF	HG	N	E	Lift up unit	リフトアップユニット

13 リフトアップユニット(Lift up unit)



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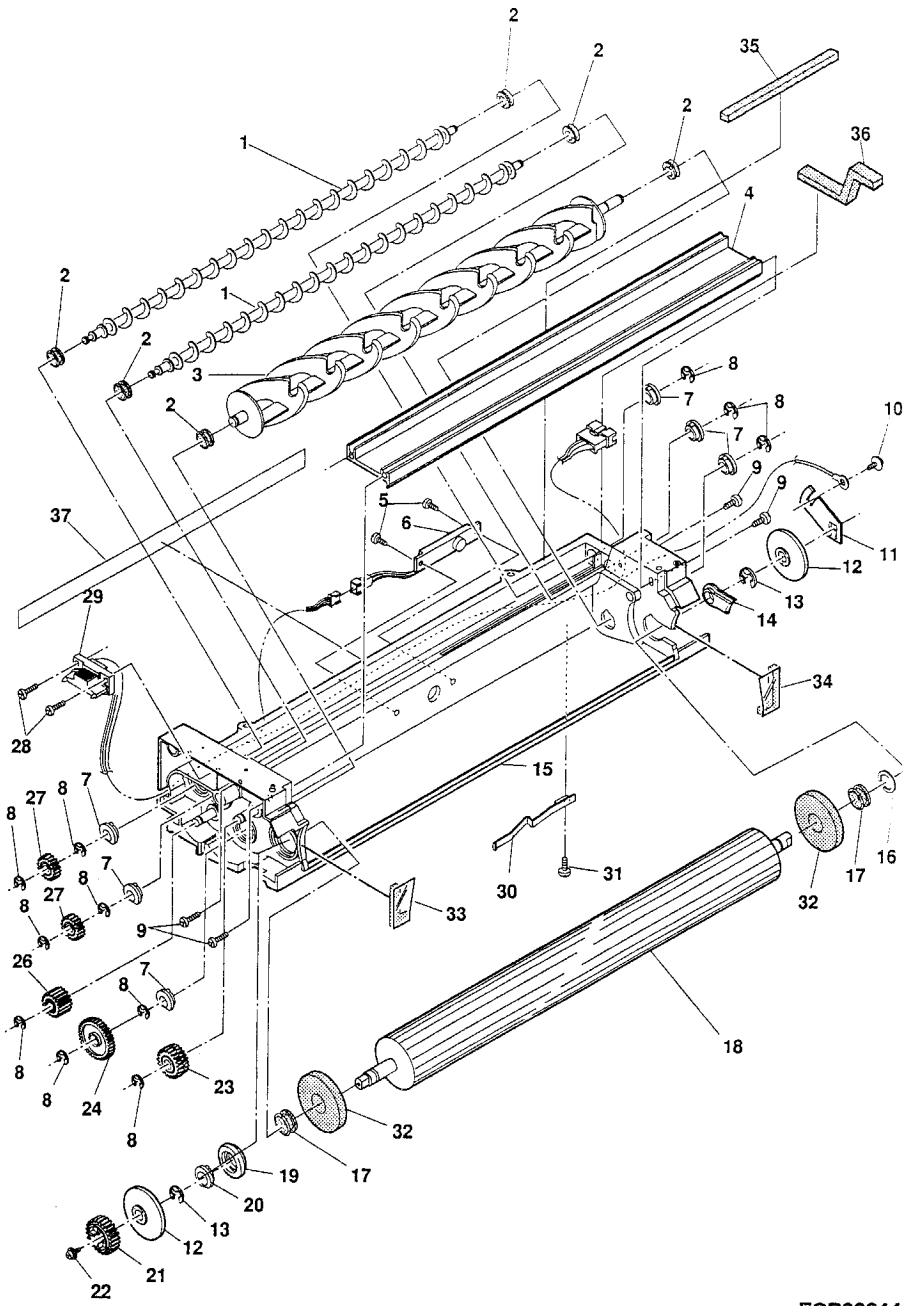
14 現像ユニット(Developing unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	NROLP0919FCZZ	AM	EG	N	C	Roller S	ローラー S
2	PRNGP0015FCZZ	AK	EB		C	V ring (φ6)	Vリング
3	NROLP0918FCZZ	AQ	EZ	N	C	Roller MX	ローラー MX
4	LPLTM4111FCZZ	AT	FG	N	C	Plate DC	プレート DC
5	XUBSD30P05000	AA	DD		C	Screw (3×5)	ビス
6	RDTCM0098FCZZ	AX	FX	N	B	ATC	ATC B9
7	NBRGC0136FCZZ	AC	DD		B	Toner box bearing (φ6)	トナーボックスヨウ ジクウケ
8	XRESP50-06000	AA	DD		C	E type ring	Eリング
9	XBBSD40P18000	AA	DD	N	C	Screw (4×18)	ビス
10	XBPSD40P08KS0	AA	DD		C	Screw (4×8KS)	ビス
11	LPLTM4112FCZZ	AC	DD	N	C	Plate PP	プレート PP
12	PCLR-0371FCZZ	AG	DS	N	C	DSD collar	DSDカラー B9
13	XRESP70-08000	AA	DD		C	E type ring	Eリング
14	LHLDZ1105FCZZ	AC	DJ	N	C	Holder MF	ホルダー MF
15	CBOX-0089FC01	AX	FX	N	C	Box D	BOX D
16	PRNGP0022FCZZ	AA	DD		C	C ring (G-8)	Cリング
17	PRNGP0013FCZZ	AK	EB		C	V ring (φ8)	Vリング
18	NROLM0915FCZZ	BG	HL	N	C	Magnet roller	MGローラー B9
19	LHLDZ1104FCZZ	AC	DJ	N	C	Holder MR	ホルダー MR
20	NBRGC0140FCZZ	AD	DJ		B	Bearing (φ8)	ベアリング
21	NGERH0879FCZZ	AC	DJ	N	C	Gear D1 23T	ギヤD1 23T
22	XBPSD30P08KS0	AA	DD		C	Screw (3×8KS)	ビス
23	CGERH0882FC01	AE	DS	N	C	Gear AD1 (21/27T)	ギヤAD1
24	NGERH0880FCZZ	AC	DJ	N	C	Gear D2 42T	ギヤD2 42T
26	CGERH0883FC01	AE	DS	N	C	Gear AD2 (24T)	ギヤAD2
27	NGERH0881FCZZ	AC	DD	N	C	Gear D3 24T	ギヤD3 24T
28	XEBSF30P10000	AA	DD		C	Screw (3×10)	ビス
29	DHAi-2060FCZZ	AQ	EQ	N	C	DV harness(black)	DVハーネス クロ
30	LSTPF0262FCZZ	AC	DD		C	Stopper DV	ストッパー DV
31	LX-BZ0529FCZZ	AA	DD		C	Screw	ビス
32	PSEL-0493FCZZ	AB	DD	N	C	Seal MG	シール MG
33	PSHEP3206FCZZ	AB	DD	N	C	Sheet DR	シート DR
34	PSHEP3205FCZZ	AB	DD	N	C	Sheet DF	シート DF
35	PSEL-0500FCZZ	AA	DD	N	C	Seal BD A	シール BD A
36	PSEL-0501FCZZ	AA	DD	N	C	Seal BD B	シール BD B
37	PSHEP3188FCZZ	AC	DJ	N	C	Sheet DV A	シート DV A
	ユニット (Unit)						
901	CBOX-0089FC51	BV	RR	N	E	DV unit(black)	ゲンゾウユニット クロ

SF2027

14 現像ユニット(Developing unit)



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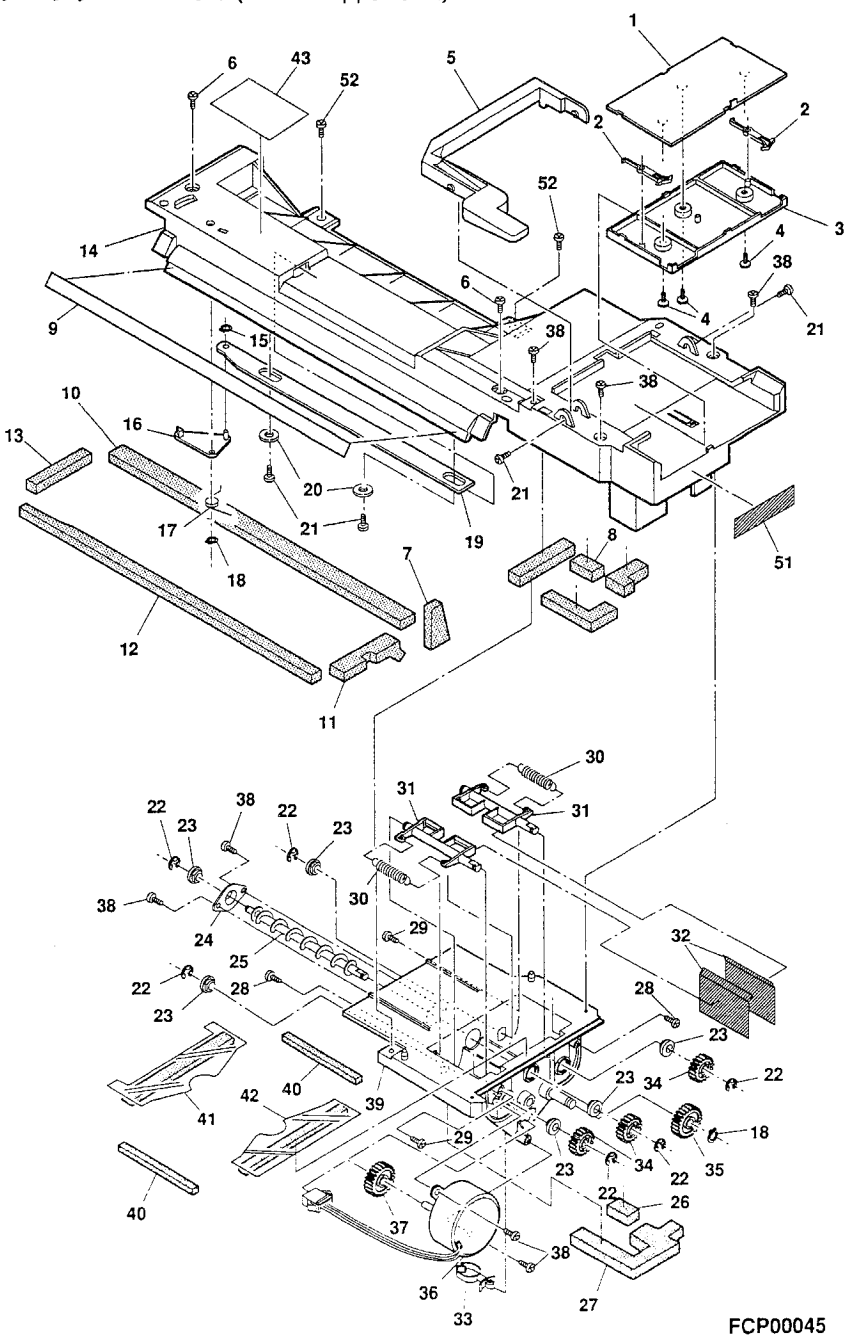
5 トナーホッパーユニット(Toner hopper unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PCOVP1140FCZZ	AE	DS	N	C	Cover TC	カバーTC
2	MARMP0151FCZZ	AB	DD	N	C	Lock arm	ロックアーム
3	PCOVP1139FCZZ	AF	DS	N	C	Cover TB	カバーTB
4	LX-BZ0529FCZZ	AA	DD		C	Screw	ビス
5	MLEVP0603FCZZ	AH	DX	N	C	Lever TC	レバーTC
6	XBBSD40P06000	AA	DD		C	Screw (4×6)	ビス
7	PSEL-0495FCZZ	AB	DD	N	C	Seal TA-R	シールTA-R
8	PSEL-0506FCZZ	AA	DD	N	C	Seal TA-C	シールTA-C
9	UCLEZ0123FCZZ	AF	DS	N	C	DV blade	DVブレード
10	PSEL-0498FCZZ	AC	DD	N	C	Seal TH-L	シールTH-L
11	PSEL-0505FCZZ	AB	DD	N	C	Seal TA-F	シールTA-F
12	PSEL-0496FCZZ	AD	DJ	N	C	Seal TA-L	シールTA-L
13	PSEL-0494FCZZ	AB	DD	N	C	Seal TA-H	シールTA-H
14	PCOVP1138FCZZ	AU	FQ	N	C	Cover TA	カバーTA
15	LX-WZ0064FCZZ	AA	DD		C	Push nut (φ3)	プッシュナット
16	LSTPP0256FCZZ	AB	DD		C	Stopper T	ストッパーT
17	MSPRT1813FCZZ	AA	DD		C	Spring T	スプリングT
18	PRNGP0025FCZZ	AA	DD		C	G ring (GTW-5)	Gリング
19	JHNDP0109FCZZ	AD	DJ	N	C	Handle TH	ハンドルTH
20	LX-WZ0225FCZZ	AA	DD		C	Washer (φ5-φ16)	ワッシャ
21	XUBSD30P05000	AA	DD		C	Screw (3×5)	ビス
22	XRESP40-06000	AA	DD		C	E Type ring	Eリング
23	NBRGP0299FCZZ	AC	DJ		B	DV bearing	DVジクウケ
24	PCOVP1141FCZZ	AC	DD	N	C	Cover TD	カバーTD
25	NSFTZ1803FCZZ	AE	DS	N	C	Shaft TB	シャフトTB
26	PSEL-0508FCZZ	AB	DD	N	C	Seal TH R-B	シールTH R-B
27	PSEL-0507FCZZ	AD	DJ	N	C	Seal TH R-A	シールTH R-A
28	XEBSD40P08000	AA	DD		C	Screw (4×8)	ビス
29	XJPSD50P08000	AA	DD		C	Screw (5×8)	ビス
30	MSPRT2005FCZZ	AC	DD	N	C	Toner spring	トナーカクハンスプリング
31	NSFTZ1802FCZZ	AC	DD	N	C	Shaft TA	シャフトTA
32	PSHEP3191FCZZ	AC	DD	N	C	Sheet TA	シート TA
33	LHLDW1119FCZZ	AA	DD	N	C	Holder	ハネリフターホルダー 28クロ
34	NGERH0884FCZZ	AC	DD	N	C	Gear TA	ギヤTA
35	NGERH0886FCZZ	AC	DD	N	C	Gear TC	ギヤTC
36	RMOTD0698FCZZ	AX	FX	N	B	Toner motor	トナーモーター
37	NGERH0885FCZZ	AC	DD	N	C	Gear TB	ギヤTB
38	XEBSF30P08000	AA	DD		C	Screw (3×8)	ビス
39	PBOX-0090FCZZ	AP	EQ	N	C	Box TH	BOX TH
40	PSEL-0504FCZZ	AB	DD	N	C	Seal TH L/R	シールTH L/R
41	PSEL-0502FCZZ	AD	DJ	N	C	Seal TH-F	シールTH-F
42	PSEL-0503FCZZ	AE	DJ	N	C	Seal TH-R	シールTH-R
43	TLABZ3143FCZZ	AB	DD	N	C	DV instruction label	DVトリアツカイセツメイラベル
51	TLABZ3168FCZZ	AB	DD	N	C	Toner identification label (Black)	トナーシキベツラベル クロ
	TLABZ3168FCZ1	AB	DD	N	C	Toner identification label (Red)	トナーシキベツラベル アカ
	TLABZ3168FCZ2	AB	DD	N	C	Toner identification label (Blue)	トナーシキベツラベル アオ
52	XBBSD40P08000	AA	DD		C	Screw	ビス
	ユニット (Unit)						
901	CBOX-0090FC51	BK	HV	N	E	Hopper unit	ホッパーユニット

15 トナーホッパーユニット(Toner hopper unit)

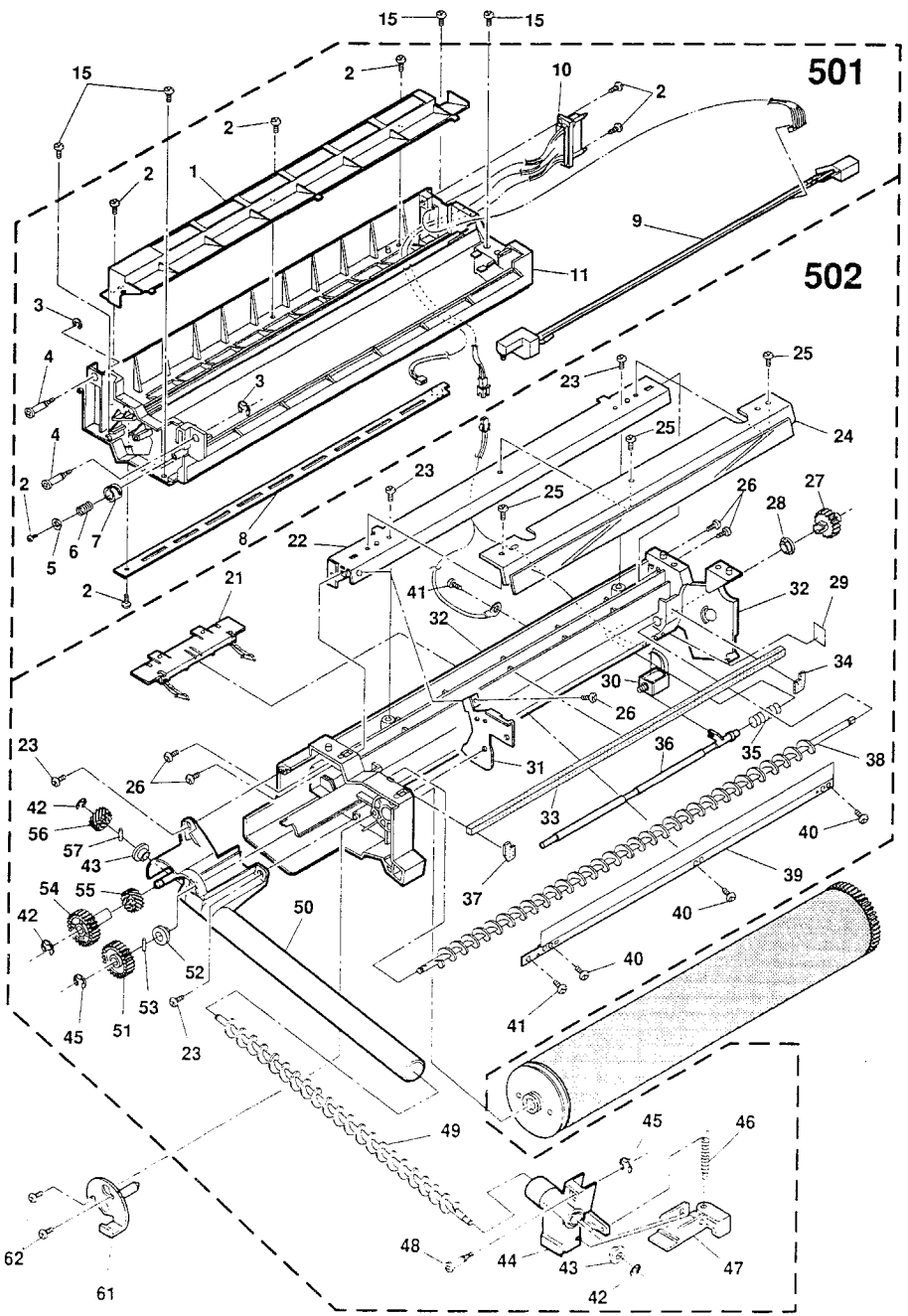


16 DR・クリーナーユニット(DR・cleaner unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PDUC-0063FCZZ	AM	EG	N	C	MC duct A	MCダクトA
2	XEBSD30P10000	AA	DD		C	Screw (3×10)	ビス
3	XRESP50-06000	AA	DD		C	E type ring	Eリング
4	LX-BZ0656FCZZ	AD	DJ	N	C	Screw	ビス
5	LX-WZ0316FCZZ	AA	DD	N	C	Washer	ワッシャ
6	MSPRC1959FCZZ	AA	DD	N	C	BL adjusting spring	BLチョウセイスプリング
7	JKNBP0122FCZZ	AC	DD	N	C	BL adjusting knob	BLチョウセイノブ
8	RLMPP0493FCZZ	AV	FQ	N	B	Discharge lamp	ジョデンランプ
9	CPWBF0932FC51	BF	HG	N	E	BL PWB	BL キバン
10	DHAi-2057FCZZ	AR	EZ	N	C	Drum harness	ドラムハーネス
11	LFRM-0733FCZZ	AT	FG	N	C	DR frame upper	DRフレームウエ
15	XBPS240P06000	AA	DD		C	Screw	ビス
21	CDAiU0451FC51	AQ	EQ	N	E	Separator pawl fixing plate unit	ハクリツメトリツケダイユニット
22	LPLTM4066FCZZ	AN	EG	N	C	DR frame joint plate	DRフレームレンケツバン
23	XEBSD30P10000	AA	DD		C	Screw (3×10)	ビス
24	UCLEZ0117FCZZ	AT	FG	N	C	Blade	ブレードB9
25	XBPS240P06000	AA	DD		C	Screw	ビス
26	XHBSD30P06000	AA	DD		C	Screw (3×6)	ビス(Sタイト)
27	NGERH0868FCZZ	AC	DD	N	C	Toner screw gear 22T	Tスクリュウギヤー22T
28	NBRGP0321FCZZ	AD	DJ		B	Bearing	ジクウケ
29	PGUMS0226FCZZ	AA	DD	N	C	Solenoid rubber	ソレノイドボウシンゴム
30	RPLU-0280FCZZ	AN	EQ	N	B	Separator solenoid	ハクリソレノイド
31	QEARP0051FCZZ	AE	DJ	N	C	DR frame lower earth plate	DRフレームシタアースイタ
32	LFRM-0732FCZZ	AX	FX	N	C	DR frame lower	DRフレーム シタ
33	PMLT-0869FCZZ	AB	DD	N	C	Blade lower cushion	ブレードシタモルト
34	PSEL-0488FCZZ	AE	DS	N	C	Blade side seal R	ブレードサイドシールR
35	MSPRC1811FCZZ	AA	DD		C	Separator lever spring	ハクリレバーヨウスプリング
36	MLEVP0596FCZZ	AD	DJ	N	C	Separator pawl lever	ハクリツメレバー
37	PSEL-0487FCZZ	AE	DS	N	C	Blade side seal F	ブレードサイドシールF
38	NSRW-0015FCZZ	AH	DX	N	C	Toner transport screw	トナーハンソウスクリュー
39	UCLEZ0118FCZZ	AS	FG	N	C	Toner holding cleaner	トナーウケ B9
40	XEPSD30P06000	AA	DD		C	Screw (3×6)	ビス(Pタイト)
41	XBPSF30P06000	AA	DD		C	Screw (3×6)	ビス
42	XRESP40-06000	AA	DD		C	4E-Type ring	Eリング
43	NBRGP0266FCZZ	AA	DD		C	Bearing (φ5)	ジクウケ
44	LHLDZ1092FCZZ	AF	DS	N	C	Waste toner pipe holder	ハイトナーパイプホルダー
45	XRESP50-06000	AA	DD		C	E type ring	Eリング
46	MSPRT1328FCZZ	AA	DD		C	Shutter spring	シャッター スプリング
47	PSHT-0058FCZZ	AD	DJ	N	C	Waste toner shutter	ハイトナーシャッター
48	LX-BZ0656FCZZ	AD	DJ	N	C	Screw	ビス
49	NSRW-0016FCZZ	AG	DS	N	C	Waste toner transport screw	ハイトナーハンソウスクリュー
50	CHLDZ1091FC01	AN	EG	N	C	Screw end	スクリューエンド
51	NGERH0209FCZ1	AB	DD		C	Delivery roller gear (24T)	ハイシローラギヤー
52	NBRGP0299FCZZ	AC	DJ		B	DV bearing	DVジクウケ
53	XPSSJ20-06000	AA	DD	N	C	Spring pin (2×6)	スプリングピン
54	NGERH0480FCZZ	AC	DJ		C	Idle gear (23T)	アイドルギヤ
55	NGERH0408FCZZ	AB	DD		C	Waste toner gear B	ハイトナーギヤーB
56	NGERH0417FCZZ	AC	DJ		C	Waste toner gear C	ハイトナーギヤーC
57	LPiN-0026MCZZ	AA	DD		C	Spring pin (φ2×10)	スプリングピン
61	CPLTM4027FC01	AL	EG	N	C	Drum control plate F A (North,South and Central america,Asian)	ドラムイチギメイタF A
	CPLTM4027FC02	AK	EB	N	C	Drum control plate F B (other countries)	ドラムイチギメイタF B
62	XBBS240P14000	AA	DD	N	C	Screw	ビス
501	CFRM-0733FC51	BL	LE	N	E	DR frame upper unit (This includes No.1~11)	DRフレームウエユニット(NO1~11)
502	CFRM-0732FC51	BN	LP	N	E	DR frame lower unit (This includes No.21~58)	DRフレームシタユニット(NO21~58)

SF2027

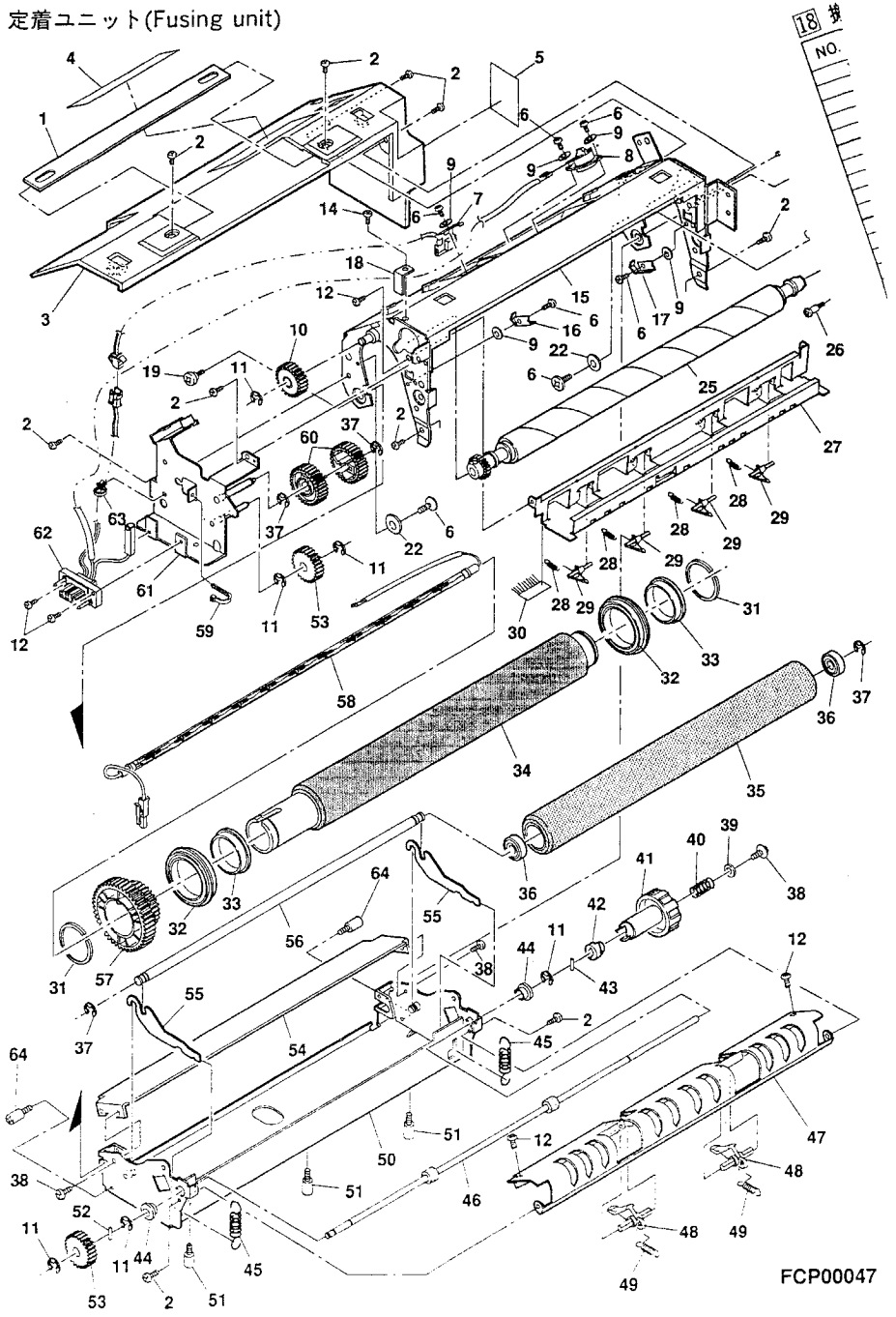
16 DR・クリーナーユニット(DR・cleaner unit)



定着ユニット(Fusing unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	JHNDP0110FCZZ	AE	DS	N	C	Fusing handle	テイチャクハンドル
2	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
3	PCOVP1133FCZZ	AU	FQ	N	C	Fusing cover	テイチャクカバーB9
4	TCAUH0878FCZZ	AC	DD		C	HT caution label (Japan only)	コウオンチュウイラベル
	TCAUH0879FCZZ	AC	DD		C	HT caution label (USA,Australia,U,Kingdom)	コウオンチュウイラベル U
	TCAUH0931FCZZ	AB	DD		C	HT caution label (other countries)	コウオンチュウイラベル E4A
5	TCAUH0959FCZZ	AA	DD	N	C	HT caution label (USA only)	コウオンチュウイラベル U
	TCAUH0932FCZZ	AB	DD		C	HT caution label (SEEG only)	コウオンチュウイラベル E4B
6	XBPSD30P04000	AA	DD		C	Screw (3×4)	ビス
7	RDTCT0082FCZZ	AQ	EZ		B	Thermistor	サーミスター
8	RTHM-0009FCZZ	AK	EB		B	Thermostat	サーモスタット
9	XWHSD30-05080	AA	DD		C	Washer	ワッシャ
10	CGERH0564FC01	AK	EB		C	CL gear (24T)	CLギヤー
11	XRESP50-06000	AA	DD		C	E type ring	Eリング
12	XBPSD30P06000	AA	DD		C	Screw (3×6)	ビス
14	XBPSD40P06KS0	AA	DD		C	Screw (4×6KS)	ビス
15	LFRM-0747FCZZ	AX	FX	N	C	Fusing upper frame	テイチャクウエフレームB9
16	LFIX-0442FCZZ	AB	DD	N	C	Fusing shaft fixing plate R	テイチャクジクオサエR
17	LFIX-0441FCZZ	AB	DD	N	C	Fusing shaft fixing plate F	テイチャクジクオサエF
18	LFIX-0446FCZZ	AC	DJ	N	C	Upper CL fixing plate	ウエCLオサエバン
19	LX-BZ0266FCZZ	AB	DD		C	Screw	ビス
21	MSPRT1955FCZZ	AC	DD	N	C	Upper CL roller spring	ウエCLローラースプリング
22	XWHSD40-08100	AA	DD		C	Washer	ワッシャ
25	CROLN0935FC31	BF	HG	N	C	Upper CL roller unit	ウエCLローラーユニット
26	LX-BZ0373FCZZ	AA	DD		C	Screw	ビス
27	LPLTM4064FCZZ	AM	EG	N	C	Upper pawl fixing plate	ウエツメトリツケバン
28	MSPRT1952FCZZ	AA	DD	N	C	Upper pawl spring	ウエツメスプリング B9
29	PTME-0168FCZZ	AH	DX		C	Separator pawl	ハクリツメ
30	PBRSS0093FCZZ	AB	DD		C	Heat roller discharge brush	ヒートローラージョデンブラシ
31	LSTPF0172FCZZ	AA	DD		C	Roller stopper	ローラーストッパー
32	NBRGY0295FCZZ	AR	EZ		C	Lower heat roller bearing	シタヒートローラーベアリング
33	LBSHC0228FCZZ	AG	DS		C	Bushing	ダンネツブッシュ
34	NROLT0913FCZZ	BD	GT	N	C	Upper heat roller	ウエヒートローラーB9
35	NROLI0583FCZZ	BE	HC		C	Lower heat roller	シタヒートローラー
36	NBRGY0296FCZZ	AK	EB		C	Lower heat roller bearing	シタヒートローラーベアリング
37	XRESP70-08000	AA	DD		C	E type ring	Eリング
38	XBPSD30P06000	AA	DD		C	Screw (3×6)	ビス
39	LX-WZ0131FCZZ	AA	DD		C	Washer	ワッシャ
40	MSPRC1954FCZZ	AB	DD	N	C	Ratchet spring	ラチエットヨウスプリング
41	JKNBP0121FCZZ	AE	DS	N	C	Fusing knob	テイチャクノブ
42	LDAIU0450FCZZ	AB	DD	N	C	Ratchet block	ラチエットブロック
43	LPINS0096FCZZ	AB	DD		C	Pin (3×12)	ヘイコウピン
44	NBRGC0188FCZZ	AB	DD		B	PF bearing	PFジクウケ
45	MSPRT1951FCZZ	AC	DD	N	C	Pressure spring	カアツスプリング B9
46	NROLR0911FCZZ	AP	EQ	N	C	Reversing roller	ハンテンローラー B9
47	LPLTM4065FCZZ	AN	EQ	N	C	Lower pawl fixing plate	シタツメトリツケバン
48	PTME-0174FCZ1	AF	DS		C	Lower separator pawl	シタハクリツメC7
49	MSPRT1953FCZZ	AA	DD	N	C	Lower pawl spring	シタツメスプリング B9
50	CFRM-0748FC01	AW	FQ	N	C	Fusing lower frame	テイチャクシタフレーム
51	LX-BZ0661FCZZ	AC	DD	N	C	Screw	ビス
52	LPIN-0026MCZZ	AA	DD		C	Spring pin (φ2×10)	スプリングピン
53	NGERH0866FCZZ	AC	DD	N	C	Gear (22T)	22Tギヤ
54	PGIDH1364FCZZ	AH	DX	N	C	Fusing front paper guide	テイチャクマエペーパーガイド
55	MLEVF0597FCZZ	AD	DJ	N	C	Pressure lever	カアツレバー B9
56	NSFTZ1778FCZZ	AK	EB	N	C	Pressure roller shaft	アッチャクローラシク
57	NGERH0475FCZZ	AK	EB		C	Heat roller gear (60T)	ヒートローラギヤ
58	RLMPU0485FCZZ	AZ	GD	N	B	Heater lamp (100V)	ヒーターランプ
	RLMPU0486FCZZ	AZ	GD	N	B	Heater lamp (110V)	ヒーターランプ
	RLMPU0487FCZZ	AZ	GD	N	B	Heater lamp (120V)	ヒーターランプ
	RLMPU0488FCZZ	AZ	GD	N	B	Heater lamp (127V)	ヒーターランプ
	RLMPU0489FCZZ	AZ	GD	N	B	Heater lamp (220V)	ヒーターランプ
	RLMPU0491FCZZ	AZ	GD	N	B	Heater lamp (240V)	ヒーターランプ
59	LBNDJ0037FCZZ	AA	DD		C	Band (T18S)	バンド
60	NGERH0621FCZZ	AD	DJ		C	Delevery roller gear (30T)	ハインデンタツ130ギヤー
61	CHLDZ1101FC01	AP	EQ	N	C	Lamp holder	ランプホルダー
62	DHAI-2056FCZZ	AS	EZ	N	C	Fusing interface harness (100V series)	テイチャクチュウケイハーネス
	DHAI-2095FCZZ	AS	EZ	N	C	Fusing interface harness (200V series)	テイチャクチュウケイハーネス
63	LBNDJ0043FCZZ	AA	DD		C	Snap band (SG-130)	スナップバンド
64	LX-BZ0671FCZZ	AD	DJ	N	C	Screw	ビス
	ユニット (Unit)						
901	DUNTW6572FCZZ	CB	UA	N	E	Fusing unit (100V)	テイチャクユニット(コウセイ)
	DUNTW6572FC15	CB	UA	N	E	Fusing unit (110V)	テイチャクユニット
	DUNTW6572FC11	CB	UA	N	E	Fusing unit (120V··USA only)	テイチャクユニット
	DUNTW6572FC12	CB	UA	N	E	Fusing unit (120V··other countries)	テイチャクユニット
	DUNTW6572FC16	CB	UA	N	E	Fusing unit (127V)	テイチャクユニット
	DUNTW6572FC17	CB	UA	N	E	Fusing unit (220V)	テイチャクユニット
	DUNTW6572FC13	CB	UA	N	E	Fusing unit (220V··SEEG only)	テイチャクユニット
	DUNTW6572FC14	CB	UA	N	E	Fusing unit (240V··Australia,U,Kingdom)	テイチャクユニット
	DUNTW6572FC18	CB	UA	N	E	Fusing unit (240V··other countries)	テイチャクユニット

17 定着ユニット(Fusing unit)



搬送DVガイドユニット(Transport DV guide unit)

	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PSHEP3127FCZZ	AE	DJ	N	C	TC guide sheet upper	TCガイドマイラーウエ
2	CGiDM1341FC01	AX	FX	N	C	DV guide	DVガイド
3	LX-BZ0180FCZZ	AA	DD		C	Screw (4×10)	ビス
4	CPLTM4145FC01	AG	DX	N	C	Plate DV	プレートDV
5	MSPRC1965FCZZ	AC	DD	N	C	DV guide spring	DVガイドスプリング
6	XRESP40-06000	AA	DD		C	E Type ring	Eリング
7	LPLTM4035FCZZ	AE	DJ	N	C	Plate DV H	プレートDVH
8	XEBSD40P08000	AA	DD		C	Screw (4×8)	ビス
9	PGiDH1368FCZZ	AG	DX	N	C	DV guide S	DVガイドS
10	XRESP20-06000	AA	DD		C	E type ring	Eリング
11	NSFTZ1595FCZZ	AD	DJ		C	Shaft G	シャフトG
12	LPLTM4034FCZZ	AK	EB	N	C	Plate DV G	プレートDVG
13	XRESP30-06000	AA	DD		C	E type ring	Eリング
14	NSFTZ1736FCZZ	AM	EG	N	C	Suction drive shaft	サクションクドウジク
15	NBRGC0254FCZZ	AB	DD		C	Delivery roller bearing	ハインローラーヨウジクウケ
16	XRESP70-08000	AA	DD		C	E type ring	Eリング
17	NGERH0188FCZZ	AD	DJ		A	Joint gear (30T)	レンケツ ギヤー
18	XEPSD40P10000	AA	DD		C	Screw (4×10)	ビス
19	PGiDH1355FCZZ	AK	EB	N	C	Charger guide	チャージャガイド
20	XEPSD40P06000	AA	DD		C	Screw (4×6)	ビス
21	LPLTM4105FCZZ	AC	DD	N	C	Terminal fixing plate	タンシトリツケイタ
22	QSLP-0155FCZZ	AB	DD	N	C	TC electrode	TCデンキョク
23	LHLDZ1078FCZZ	AE	DS	N	C	Electrode holder	デンキョクホルダー
24	MSPRP1932FCZZ	AD	DJ	N	C	Suction lift plate spring	サクションリフトイタスプリング
25	PDUC-0060FCZZ	AG	DX	N	C	Charger duct	チャージャーダクト
26	MSPRT1938FCZZ	AB	DD	N	C	Suction plate F spring	サクションイタF スプリング
27	LHLDZ1096FCZZ	AD	DJ	N	C	Charger fulcrum holder F	チャージャシテンホルダーF
28	LPLTP4022FCZZ	AH	DX	N	C	Suction plate F	サクションバンF
29	LPiNS0155FCZZ	AA	DD		C	Pin (φ3×10)	ヘイコウピン
30	NROLP0487FCZZ	AB	DD		C	Suction drive roller	サクションクドウローラー
31	NBLTH0170FCZZ	AH	DX		B	Suction belt	サクションベルト
32	XRESP50-06000	AA	DD		C	E type ring	Eリング
33	NROLP0833FC21	AC	DD		C	Belt roller	ベルトローラー
34	NSFTZ1737FCZZ	AG	DS	N	C	Suction shaft	サクションジュウドウジク
35	LHLDZ1079FCZZ	AD	DJ	N	C	Suction holder	サクションホルダー
36	MLEVP0584FCZZ	AG	DX	N	C	Suction lift lever	サクションリフトレバー
37	NGERH0314FCZZ	AC	DD		C	Toner transport gear (16T)	トナーハンソウギヤー
38	LPiNS0258FCZZ	AA	DD	N	C	Spring pin (3-8)	スプリングピン3-8
39	NSFTZ1734FCZZ	AH	DX	N	C	Suction lift shaft	サクションリフトジク
40	JKNBP0120FCZZ	AE	DJ	N	C	Transport roller gear knob	ハンソウローラーギヤノブ
41	QSW-M0339FCZZ	AK	EB		B	Microswitch	マイクロスイッチ
42	CPLTM4031FC01	AX	FX	N	C	Transport base reinforce plate F	ハンソウダイホキョウバン F
43	LPLTM4032FCZZ	AT	FG	N	C	Transport base supply plate TC	ハンソウダイホジバン TC
44	LPLTP4021FCZZ	AK	EB	N	C	Suction plate lower	サクションバン シタ
45	MLEVP0585FCZZ	AC	DJ	N	C	PPD1 actuator	PPD1アクチュエーター
46	MSPRT1984FCZZ	AB	DD	N	C	PPD1 spring	PPD1 ヨウスプリング
47	NBRGC0066FCZZ	AE	DJ		C	Cleaner drive bearing	クリーナー クドウヨウ ベアリング
48	CROLR0897FC01	AS	EZ	N	C	Transport roller	ハンソウローラー
49	PGiDM1339FCZZ	AC	DD	N	C	Suction lift guide	サクションリフトガイド
50	LPiNS0096FCZZ	AB	DD		C	Pin (3×12)	ヘイコウピン
51	MLEVP0600FCZZ	AD	DJ	N	C	PPD2 actuator	PPD2アクチュエーター
52	PSHEZ3126FCZZ	AB	DD	N	C	PS front sheet	PSマエシート B9
53	PCLC-0204FCZZ	AW	FQ	N	C	PS clutch	PSクラッチ B9
54	MLEVP0583FCZZ	AD	DJ	N	C	MS2 actuator	MS2アクチュエーター
55	MSPRC1863FCZZ	AA	DD		C	PS brake spring	PSブレーキスプリング
56	LX-WZ0017FCZZ	AA	DD		C	Washer (φ8)	ワッシャ
57	NGERH0317FCZZ	AC	DJ		C	DV gear (18T)	DVギヤー
58	NROLR0899FCZZ	AX	FX	N	C	PS roller lower	PSローラーシタ B9
59	NBRGC0037FCZZ	AF	DJ		B	Bearing B	ジクウケ B
60	MSPRT1646FCZZ	AB	DD		C	PS spring	PSスプリング
61	NROLP0898FCZZ	AT	FG	N	C	PS roller upper	PSローラーウエ B9
62	LDAiU0448FCZZ	BE	HC	N	C	Transport base plate	ハンソウダイバン
63	XBPSD40P10KS0	AA	DD		C	Screw (4×10KS)	ビス
64	XNESD40-32000	AA	DD		C	Nut	ナット
65	DHAi-2108FCZZ	AD	DJ	N	C	TC guide earth harness	TCガイドアースハーネス
66	TCAUH0819FCZZ	AA	DD		C	High voltage caution label (Japan only)	コウアツチュウイラベル J
67	TCAUH0963FCZZ	AB	DD	N	C	High voltage caution label (USA,Australia,U.Kingdom)	コウアツチュウイラベル U
	TCAUH0821FCZZ	AA	DD		C	High voltage caution label (Other countries)	コウアツチュウイラベル E4
	DHAi-2046FCZZ	AH	DX	N	C	TFD interface harness	TFDチュウケイハーネス
	PCOVQ1152FCZZ	AG	DS	N	C	Dry heater pressure cover (SF-2022H/SF-2027H)	ジョンツヒーターシーネツカバー
	CR-WZ0244FC05	AQ	EZ		B	Dry heater (SF-2022H/SF-2027H)	ジョンツヒーター 120
	XEPSD40P08000	AA	DD		C	Screw (4×8) (SF-2022H/SF-2027H)	ビス
	XBPSD40P08KS0	AA	DD		C	Screw (4×8KS) (SF-2022H/SF-2027H)	ビス
	LPLTM4149FCZZ	AH	DX	N	C	Dry heater fixing plate (SF-2022H/SF-2027H)	ジョンツヒーターストリツケイタ

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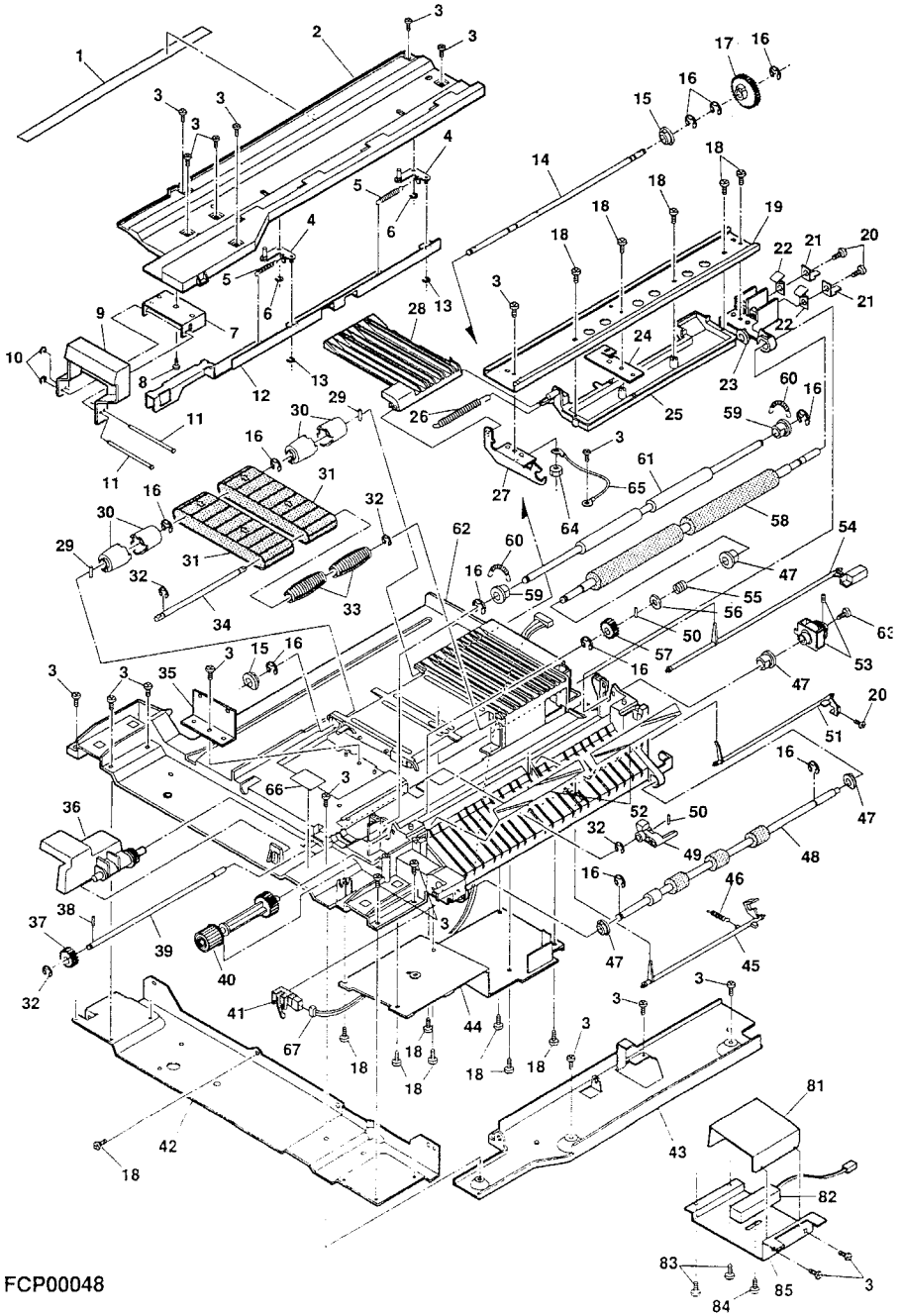
18 搬送DVガイドユニット(Transport DV guide unit)



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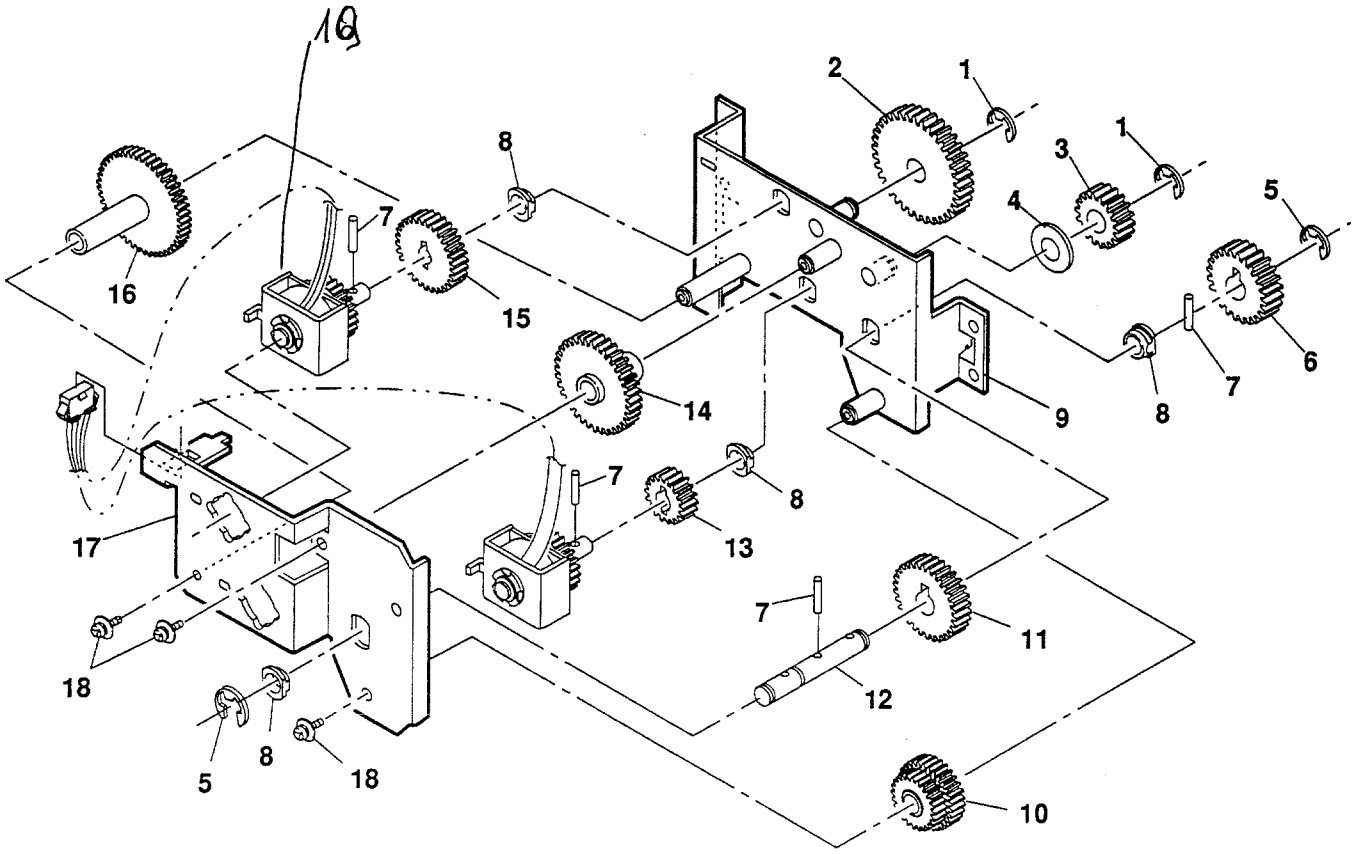
19 給紙変速ユニット(Paper feed speed change unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP50-06000	AA	DD		C	E type ring	Eリング
2	NGERH0857FCZZ	AE	DJ	N	C	35T gear	35Tギヤー
3	NGERH0457FCZZ	AC	DD		C	DV drive gear R	DVクドウギヤー R
4	XWHSD80-16160	AA	DD		C	Washer	ワッシャ
5	XRESP70-08000	AA	DD		C	E type ring	E リング
6	NGERH0349FCZZ	AC	DD		C	CL gear (28T)	CLギヤー
7	LPINS0155FCZZ	AA	DD		C	Pin (φ3×10)	ヘイコウピン
8	NBRGC0319FCZZ	AD	DJ		C	Bush bearing	ブッシュジクウケ
9	CFRM-0740FC01	AW	FX	N	C	Speed change frame B	ヘンソクフレームB50
10	NGERH0856FCZZ	AE	DS	N	C	24/30T gear	24/30Tギヤー
11	NGERH0853FCZZ	AE	DJ	N	C	32T gear	32Tギヤー
12	NSFTZ1755FCZZ	AM	EG	N	C	Speed change drive shaft 1	ヘンソククドウジク1
13	NGERH0317FCZZ	AC	DJ		C	DV gear (18T)	DVギヤー
14	NGERH0854FCZZ	AE	DS	N	C	40T gear	40Tギヤー
15	NGERH0852FCZZ	AE	DJ	N	C	30T gear	30Tギヤー
16	NGERH0855FCZZ	AE	DS	N	C	45T gear	45Tギヤー
17	LFRM-0739FCZZ	AK	EB	N	C	Speed change frame A	ヘンソクフレームA50
18	XBPSD40P08KS0	AA	DD		C	Screw (4×8KS)	ビス
	ユニット (Unit)						
901	CFRM-0740FC31	BK	HZ	N	E	Paper feed speed change unit	キュウシヘンソクフレームユニット
19	CCLC-0206FC01			BF			



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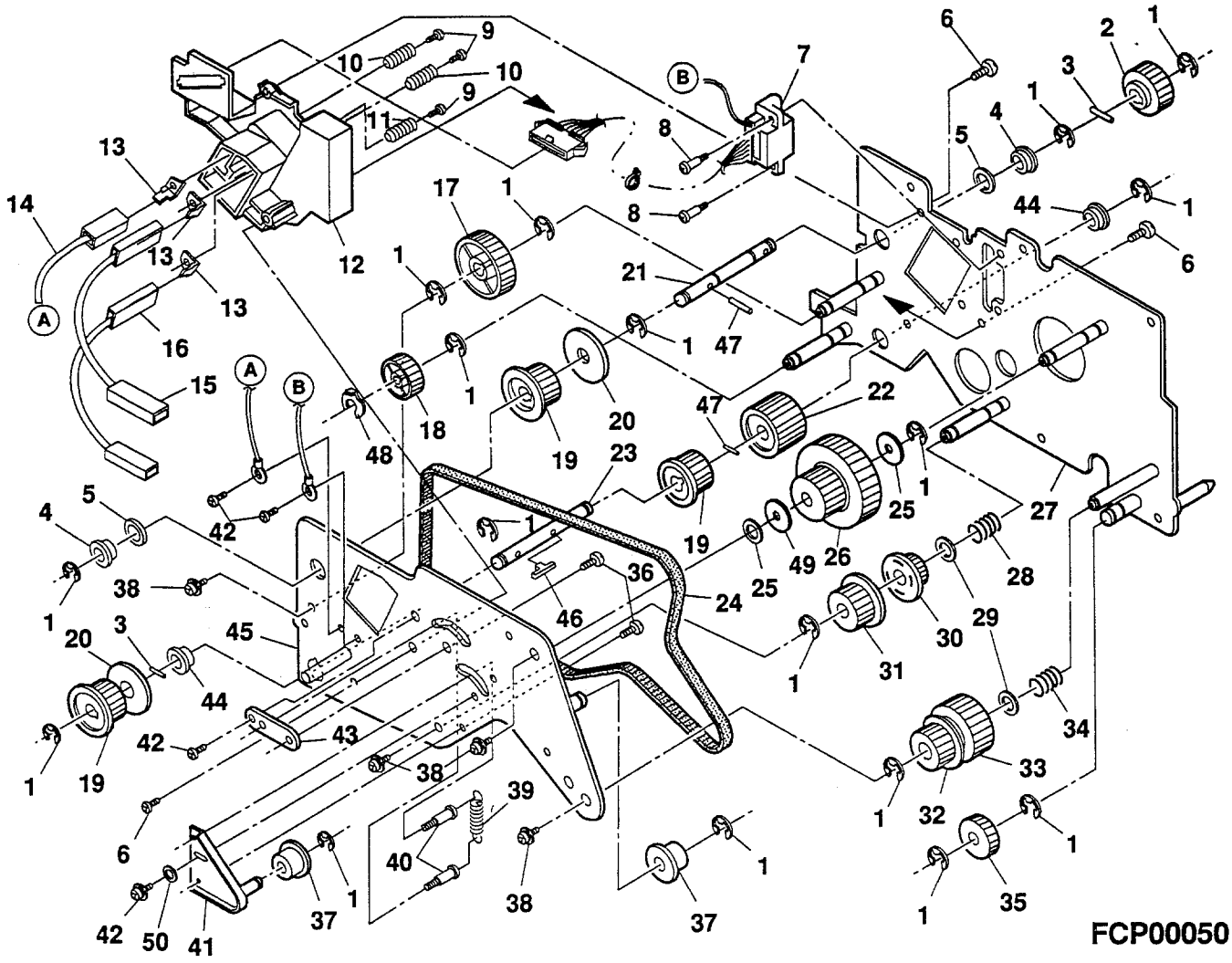
20 メイン駆動ユニット(Main drive unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP70-08000	AA	DD		C	E type ring	Eリング
2	NGERH0846FCZZ	AF	DS	N	C	DR drive gear 24T	DRクドウギヤ24
3	LPiNS0155FCZZ	AA	DD		C	Pin (φ3×10)	ヘイコウピン
4	NBRGY0466FCZZ	AK	EB	N	B	Ball bearing	ボールベアリング
5	LX-WZ0322FCZZ	AA	DD	N	C	Washer	ワッシャ
6	XEPSD40P10000	AA	DD		C	Screw (4×10)	ビス
7	DHAi-2043FCZZ	AS	FG	N	C	Drum interface harness	ドラムチュウケイハーネス
8	LX-BZ0583FCZZ	AB	DD		C	Screw	ビス
9	XBPSD30P06000	AA	DD		C	Screw (3×6)	ビス
10	MSPRP1293FCZZ	AB	DD		C	Electrode spring	デンキョク スプリング
11	MSPRP1426FCZZ	AB	DD		C	Electrode spring	マゲデンキョクスプリング
12	QSOCZ0059FCZZ	AL	EG	N	C	MC socket	MCソケット
13	QSLP-0159FCZZ	AC	DD	N	C	Socket electrode	ソケットデンキョク
14	DHAi-2073FCZZ	AD	DJ	N	C	High voltage grand harness	コウアツグランドハーネス
15	DHAi-2065FCZZ	AD	DJ	N	C	MC harness	MCハーネス
16	DHAi-2066FCZZ	AD	DJ	N	C	GB harness	GBハーネス
17	NGERH0049FCZZ	AD	DJ		A	Develop gear (36T)	DV ギヤー
18	NGERH0457FCZZ	AC	DD		C	DV drive gear R	DVクドウギヤー R
19	NPLYZ0258FCZZ	AC	DJ	N	C	Pulley 30P-B	プーリー30P-B
20	PCLR-0367FCZZ	AC	DD	N	C	Pulley	プーリーカラー
21	NSFTZ1743FCZZ	AG	DX	N	C	DR drive shaft	DRクドウジク
22	NGERH0849FCZZ	AE	DJ	N	C	30T gear	30Tギヤー
23	NSFTZ1745FCZZ	AH	DX	N	C	Paper feed drive shaft	キュウシクドウジク
24	NBLTH0183FCZZ	AK	EB	N	B	Drive belt A	クドウベルトA
25	LX-WZ0094FCZZ	AA	DD		B	Washer	ポリスライダー
26	NGERH0845FCZZ	AM	EG	N	C	Speed change gear	ヘンソクギヤーB9
27	CFRM-0737FC01	AU	FQ	N	C	Main drive frame A	メインクドウフレームA
28	MSPRC2001FCZZ	AB	DD	N	C	Gear pressure spring 2	ギヤーアッチャクスプリング2
29	LX-WZ0017FCZZ	AA	DD		C	Washer	ワッシャ
30	NGERH0848FCZZ	AC	DJ	N	C	Cleaner drive gear 22T	クリーナークドウギヤ22
31	NPLYZ0271FCZZ	AF	DS	N	C	Pully 30P-A	プーリー30P-A
32	NPLYZ0273FCZZ	AH	DX	N	C	Pulley 30P-B	プーリー30P-B
33	NGERH0847FCZZ	AD	DJ	N	C	HR drive gear 36T	HRクドウギヤ36
34	MSPRC1940FCZZ	AA	DD	N	C	Gear pressure spring	ギヤアッチャクスプリング
35	NGERH0111FCZZ	AD	DJ		C	Gear (24T)	ギヤー
36	LX-BZ0581FCZZ	AB	DD		C	Screw	ビス
37	NPLYZ0259FCZZ	AC	DD	N	C	Tension pulley 19	テンションプーリ19
38	XBPSD40P08KS0	AA	DD		C	Screw (4×8KS)	ビス
39	MSPRC1980FCZZ	AB	DD	N	C	Tension spring	テンションスプリング B9
40	LX-BZ0659FCZZ	AB	DD	N	C	Screw	ビス
41	CPLTM4036FC01	AH	DX	N	C	Tension plate A	テンションプレートA
42	XHBSD40P10000	AA	DD		C	Screw (4×10)	ビス
43	LPLTM4107FCZZ	AC	DD	N	C	Tension plate B	テンションプレートB
44	NBRGC2019SCZZ	AC	DJ		B	Bearing (φ8)	ベアリング
45	CFRM-0738FC01	AN	EQ	N	C	Main drive frame B	メインクドウフレームB
46	LPiNS0263FCZZ	AD	DJ	N	C	T type pin	Tガタピン
47	LPiNS0262FCZZ	AB	DD	N	C	Spring pin (3×9.5)	スプリングピン
48	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
49	PCLR-0377FCZZ	AC	DD	N	C	Gear collar	ヘンソクギヤーカラー
50	XWVSD50-06000	AA	DD		C	Washer	キクワッシャ
	ユニット (Unit)						
901	DUNTM6560FCZZ	BP	MB	N	E	Main drive unit	メインクドウユニット

20 メイン駆動ユニット(Main drive unit)



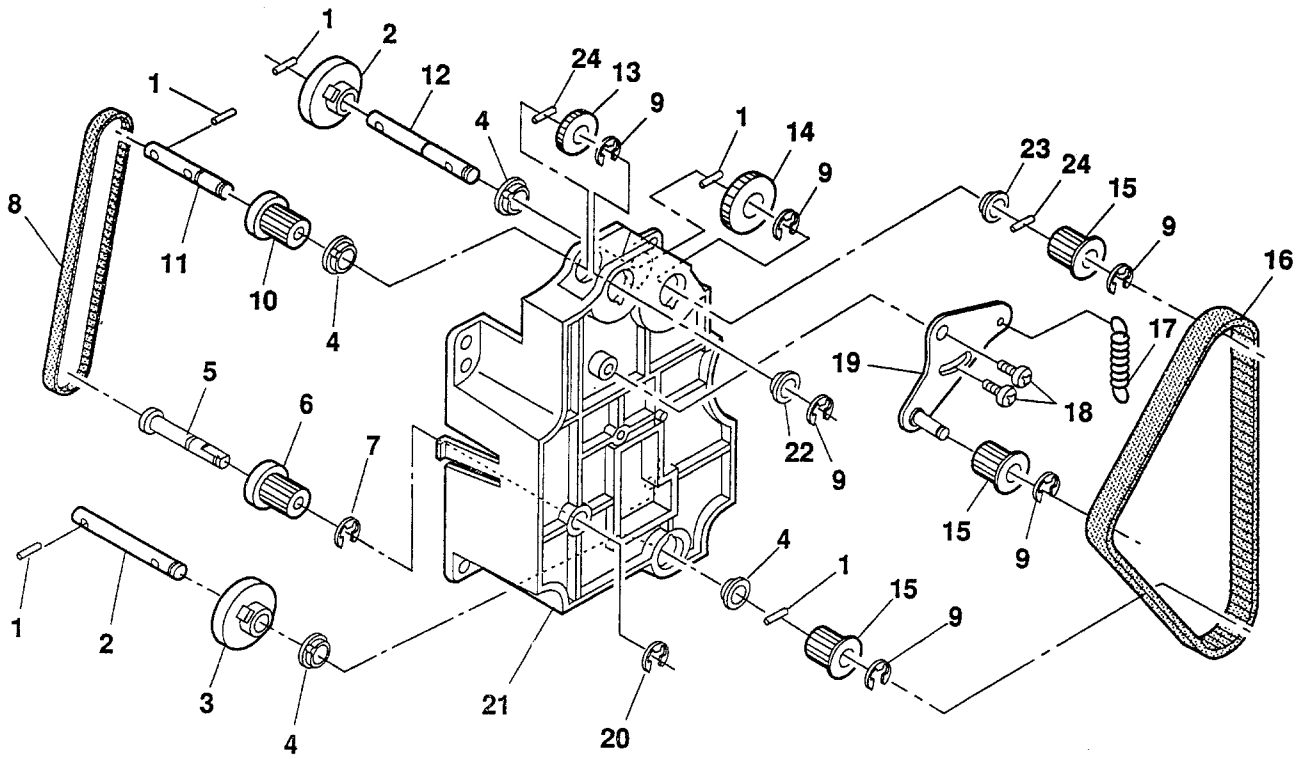
21 給紙駆動フレームユニット(Paper feeding drive frame unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPiNS0155FCZZ	AA	DD		C	Pin (φ3×10)	ヘイコウピン
2	NSFTZ1749FCZZ	AF	DS	N	C	Paper feed drive shaft 2	キュウシクドウジク2
3	NCPL-0013FCZZ	AC	DD	N	C	PF cup ring	キュウシカップリング
4	NBRGC2019SCZZ	AC	DJ		B	Bearing (φ8)	ベアリング
5	NSFTZ1751FCZZ	AD	DJ	N	C	Paper feed drive shaft 4	キュウシクドウジク4
6	NPLYZ0261FCZZ	AC	DD	N	C	Pulley 19P	プーリー19P
7	XRESP50-06000	AA	DD		C	E type ring	Eリング
8	NBLTH0185FCZZ	AF	DS	N	B	Drive belt D	クドウベルトD
9	XRESP70-08000	AA	DD		C	E type ring	E リング
10	NPLYZ0270FCZZ	AC	DD	N	C	Pulley 17P-B	プーリー17P-B
11	NSFTZ1750FCZZ	AG	DS	N	C	Paper feed drive shaft 3	キュウシクドウジク3
12	NSFTZ1748FCZZ	AG	DX	N	C	Paper feed drive shaft 1	キュウシクドウジク1
13	NGERH0317FCZZ	AC	DJ		C	DV gear (18T)	DVギヤー
14	NGERH0457FCZZ	AC	DD		C	DV drive gear R	DVクドウギヤー R
15	NPLYZ0260FCZZ	AC	DD	N	C	Pulley 17P-A	プーリー17P-A
16	NBLTH0184FCZZ	AF	DS	N	B	Drive belt C	クドウベルトC
17	MSPRT1982FCZZ	AB	DD	N	C	PF drive tension spring	キュウシクドウテンションスプリング
18	XEPSD40P10000	AA	DD		C	Screw (4×10)	ビス
19	CPLTM4037FC01	AG	DS	N	C	PF drive tension plate	キュシクドウテンションプレート
20	XRESP40-05000	AA	DD		C	E type ring	Eリング
21	LFRM-0730FCZZ	AK	EB	N	C	Paper feed drive frame A	キュウシクドウフレームA
22	NBRGC0468FCZZ	AE	DJ	N	C	Paper feed drive bearing 2	キュウシクドウジクウケ 2
23	NBRGC0467FCZZ	AD	DJ	N	C	Paper feed drive bearing 1	キュウシクドウジクウケ 1
24	LPiNS0262FCZZ	AB	DD	N	C	Spring pin (3×9.5)	スプリングピン

22 DV駆動ユニット(DV drive unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	NSFTZ1752FCZZ	AD	DJ	N	C	DV drive shaft	DVクドウジク
2	NGERH0850FCZZ	AC	DD	N	C	18T gear	18Tギヤー
3	MSPRC1941FCZZ	AA	DD	N	C	DV 18T spring	DV18T スプリング B9
4	LX-WZ0031FCZZ	AA	DD		C	Washer	ワッシャ
5	XRESP50-06000	AA	DD		C	E type ring	Eリング
6	XRESP40-05000	AA	DD		C	E type ring	Eリング
7	LX-BZ0414FCZZ	AB	DD		C	Screw	ビス
8	LFRM-0731FCZZ	AH	DX	N	C	DV drive frame A	DVクドウフレームA
9	DHAi-2042FCZZ	AQ	EZ	N	C	DV interface harness	DVチュウケイハーネス

21 給紙駆動フレームユニット(Paper feeding drive frame unit)



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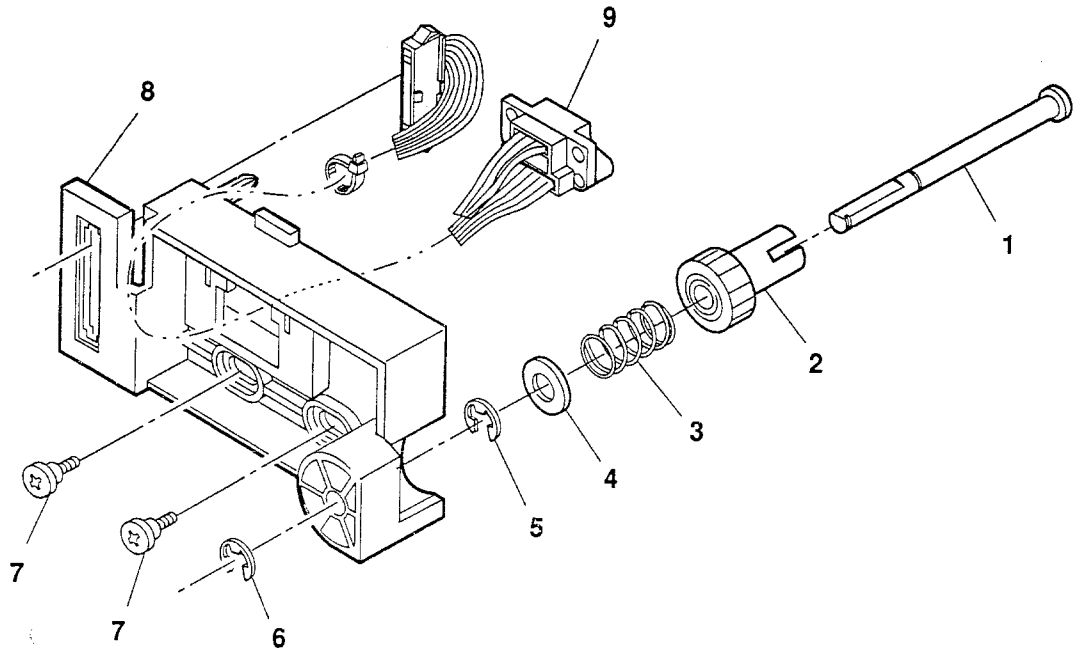
22 DV駆動ユニット(DV drive unit)



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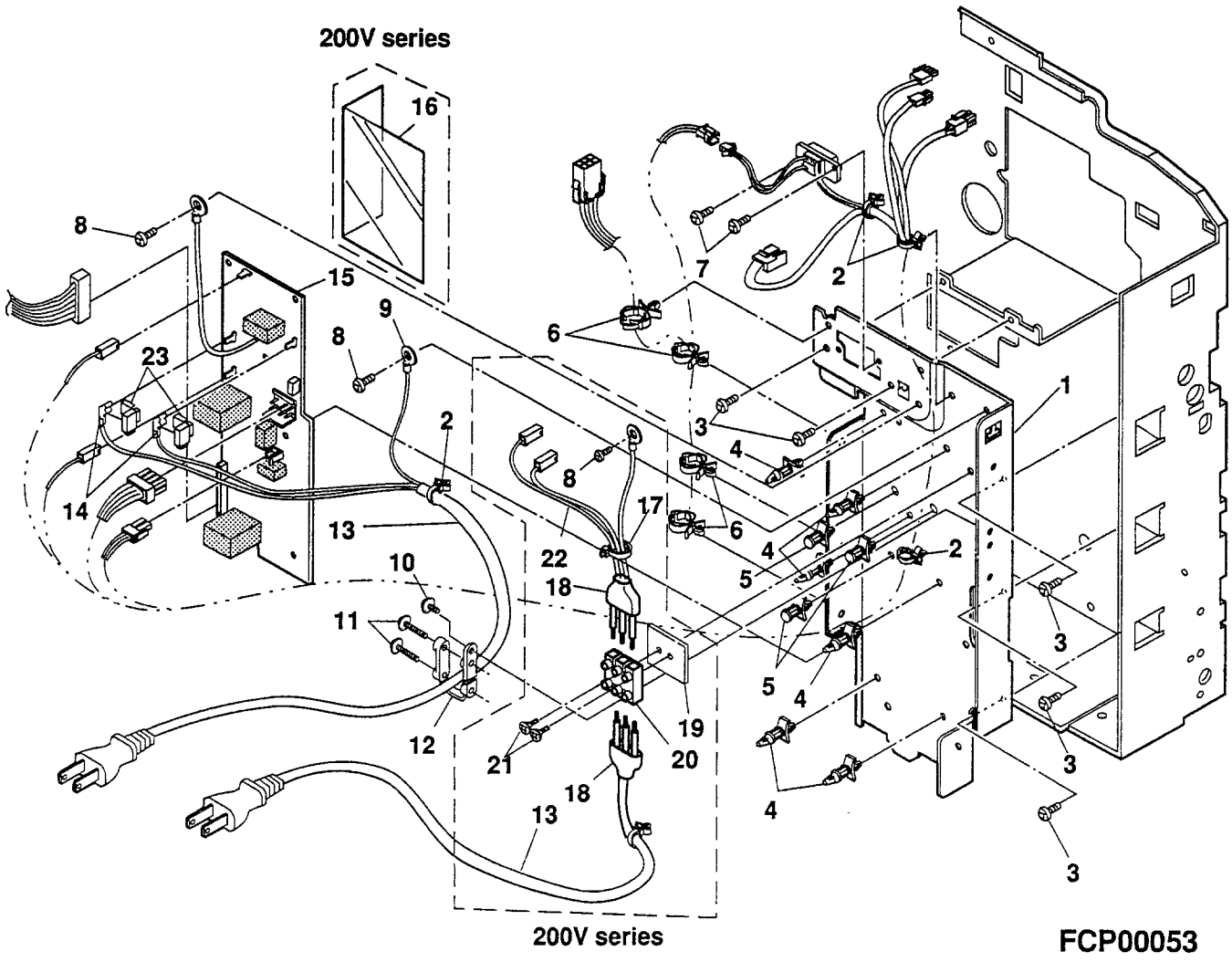
23 AC回路台板ユニット(AC circuit base plate unit)

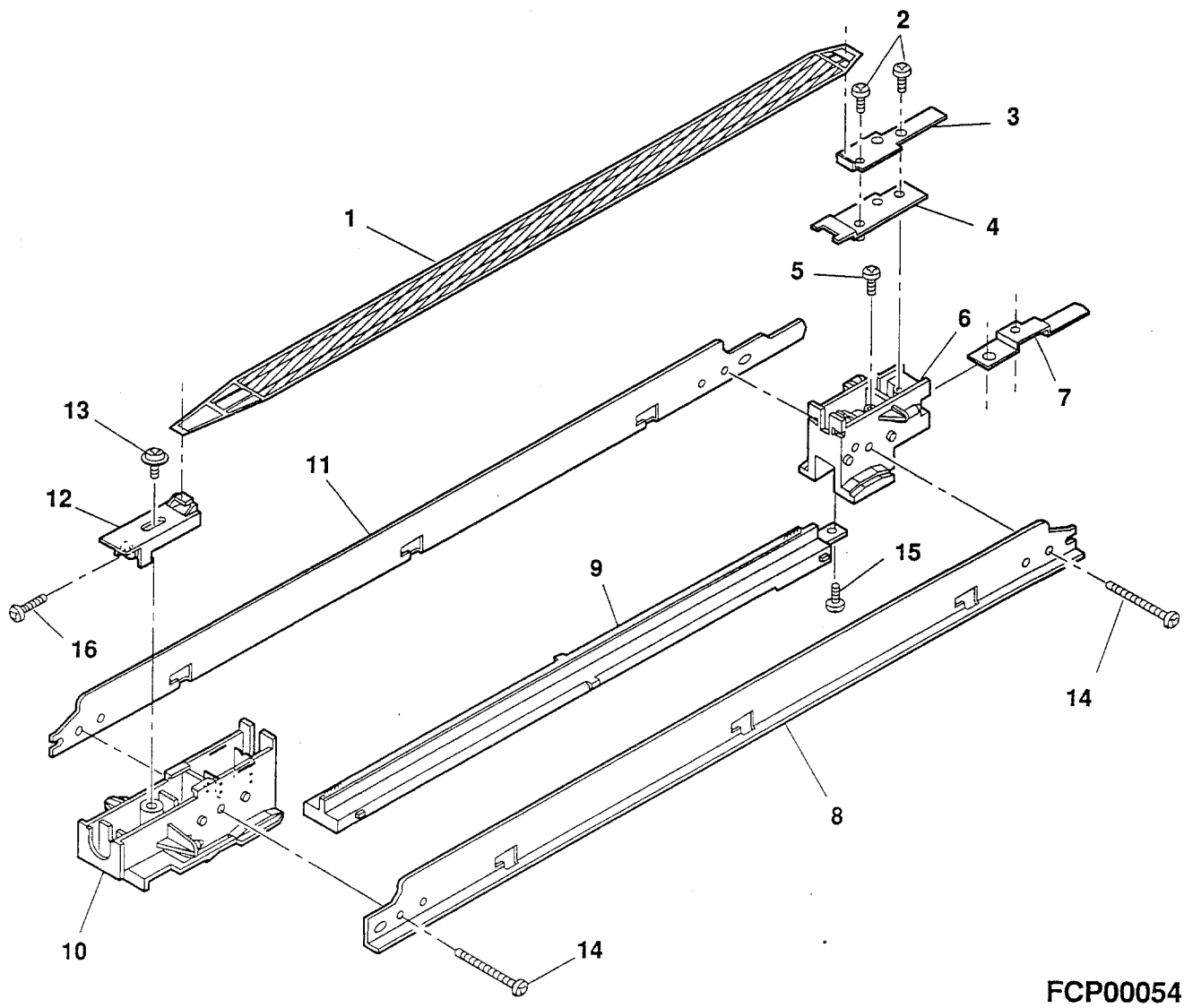
NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LDAiU0454FCZZ	AN	EQ	N	C	AC circuit base	ACカイロダイバン
2	LBNDJ0043FCZZ	AA	DD		C	Snap band (SG−130)	スナップバンド
3	XHBSD40P10000	AA	DD		C	Screw (4×10)	ビス
4	LSUPP0060FCZZ	AA	DD		C	PWB supporter (SPLS−6)	キバンサポーター
5	LSUPP0076FCZZ	AA	DD	N	C	PWB supporter (SPS−6)	キバンサポーター
6	LHLDW1009FCZZ	AB	DD		C	Wire holder (X14−4.8) (SF−2022H/SF−2027H)	ツイストホルダー
	LHLDW1112FCZZ	AA	DD	N	C	Wire holder (X10−4.8)	ツイストホルダー
7	LX−BZ0102FCZZ	AA	DD		C	Screw (4×10)	ビス
8	XBPBZ40P06K00	AA	DD		C	Screw (4×6K)	ビス
9	QTANP0176FCZZ	AB	DD	N	C	Terminal (V2−M4)(100V series)	タンシ
10	XBPSD40P08KS0	AA	DD		C	Screw (4×8KS)	ビス
11	XBPSD40P25XS0	AA	DD		C	Screw (4×25XS)(USA,CANADA,Barbados,Costa Rica,Brazil)	ビス
	XBPSD40P20XS0	AA	DD		C	Screw (4×20XS)(Other countries)	ビス
12	LFiX−0084FCZZ	AC	DD		C	AC Cord holder (USA,CANADA Barbados,Costa Rica,Brazil)	AC コードオサエ
	LFiX−0016FCZZ	AD	DJ		C	AC Cord holder (Other countries)	AC コードオサエ
⚠	QACCJ3410QCZZ	AS	EZ	N	B	AC cord(Japan,Dominica,Middle America,Colombia, Venezuela,Taiwan,Ecuador,Indonesia,philippines)	ACコード
⚠	QCNW−0069FCZZ	AC	DD		C	Earth wire(Japan,Dominica,Middle America, Ecuador,Indonesia,Colombia,Venezuela,Taiwan)	アースワイヤー
⚠	QACCD7412QCN3	AS	FG		B	AC cord (USA,CANADA,Barbados,Costa Rica,Brazil)	ACコード
⚠	QACCL8421QCZZ	AW	FX		B	AC cord (Australia)	ACコード
⚠	QACCV6420QCZZ	AV	FQ		B	AC cord(SEEG,Paraguay,Argentine,Pakistan,Indonesia,Greece, Lebanon,Iran,Iraq,Nigeria,Turkey,West Africa,Algeria,Thailand	ACコード
⚠	QACCV6420QCZZ	AV	FQ		B	AC cord(Korea,Egypt,Jordan,syria,U.A.E,Tunisia, Morocco,India,Bangladesh,Uruguay,Oman,Katr)	ACコード
⚠	QCNW−0001QCZZ	AN	EQ		C	AC wire(U,Kingdom,Cyprus,Malaysia,Bahrain,Kuwait,North Yemen, Saudi Arabia,South Africa,Sri Lanka,Hong Kong(SRH)Israrl)	ACワイヤー
⚠	QCNW−0001QCZZ	AN	EQ		C	AC wire (Singapore(SRS))	ACワイヤー
⚠	QPLGA0005QCZZ	AN	EQ		C	AC plug(U,Kingdom,Cyprus,Malaysia, Bahrain,Kuwait,North Yemen,Saudi Arabia)	ACプラグ
⚠	QCNW−0131FCZZ	AU	FQ		B	AC wire (Chile,Peru)	ACワイヤー(マル4−2P)
⚠	QCNW−0120FCZZ	AU	FQ		B	AC wire (Saudi Arabia)	ACワイヤー
⚠	QPLGA0002QCZZ	AN	EQ		C	AC plug (Saudi Arabia)	ACプラグ
⚠	QTANP0096FCZZ	AA	DD		C	AC terminal (Saudi Arabia)	センカコウタンシ
⚠	PHOG−1023CCZZ	AB	DD		C	AC protect cover (South Africa,Sli Lanka,Hong Kong(SRH))	ACホゴブツ
⚠	QPLGA4171CCZZ	AN	EG		C	AC plug (South Africa,Sli Lanka,Hong Kong(SRH))	ACプラグ(フトマル3)
⚠	QPLGA0001QCZZ	AN	EQ		C	AC plug (Israel)	ACプラグ
⚠	QPLGA0003QCZZ	AN	EQ		C	AC plug (Singapore(SRH))	ACプラグ
14	QTANP0178FCZZ	AB	DD	N	C	Terminal (175057−1)(100V series)	タンシ
⚠	CPWBF0942FC51	BM	LJ	N	E	AC circuit PWB (Japan only)	ACカイロキバン J
⚠	CPWBF0930FC51	BM	LJ	N	E	AC circuit PWB (100V series)	ACカイロキバン100
⚠	CPWBF0931FC51	BQ	MJ	N	E	AC circuit PWB (200V series)	ACカイロキバン200
16	PSHEP3201FCZZ	AG	DX	N	C	AC protect sheet (200V series)	ACホゴマイラー
17	LBNDJ0013FCZZ	AA	DD		C	Wire band (200V series)	ワイヤーバンド
18	PHOG−0346FCZZ	AB	DD		C	3P terminal base cover (200V series)	3Pタンシダイカバー
19	PSHEP1804FCZZ	AB	DD		C	3P terminal protect sheet (200V series)	3Pタンシホゴシート
20	QTANN0015FCZZ	AG	DS		C	3P terminal base (200V series)	3Pタンシダイ
21	XBPSD30P14000	AA	DD		C	Screw (3×14)(200V series)	ビス
22	DHAi−2103FCZZ	AH	DX	N	C	3P terminal base harness (200V series)	3Pタンシダイハーネス
23	PHOG−0387FCZZ	AB	DD	N	C	Plug holder (176497−1)(100V series)	プラグホルダー

23 AC回路台板ユニット(AC circuit base plate unit)



24 MCユニット(MC unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LPLTZ4069FCZZ	AK	EB	N	C	Grid	グリッド B9
2	XEPSD30P06000	AA	DD		C	Screw (3×6)	ビス
3	QSLP-0158FCZZ	AF	DS	N	C	MC grid electrode	MCグリッドデンキョク
4	PCOVP1130FCZZ	AB	DD	N	C	MC cover R	MCカバーR
5	XBPSD30P10000	AA	DD		C	Screw (3×10)	ビス
6	LHLDZ1095FCZZ	AD	DJ	N	C	MC holder R	MCホルダーR
7	QSLP-0157FCZZ	AE	DS	N	C	MC electrode	MCデンキョク B9
8	LPLTM4067FCZZ	AN	EG	N	C	MC plate R	MCプレートR B9
9	CPLTM4129FC01	AS	EZ	N	C	Plate	ノコバ B9
10	LHLDZ1094FCZZ	AD	DJ	N	C	MC holder F	MCホルダーF
11	LPLTM4068FCZZ	AM	EG	N	C	MC plate L	MCプレートL B9
12	LHLDZ0932FCYZ	AD	DJ	N	C	Grid holder	グリッドホルダー
13	LX-BZ4008SC0M	AA	DD		B	Screw (4×8)	ビス
14	XBPSD30P20000	AA	DD		C	Screw (3×20)	ビス
15	XBPSD30P04000	AA	DD		C	Screw (3×4)	ビス
16	XBBSD40P12000	AA	DD		C	Screw (4×12)	ビス
	ユニット (Unit)						
901	CPLTM4067FC51	BB	GN	N	E	MC unit	MC ユニット



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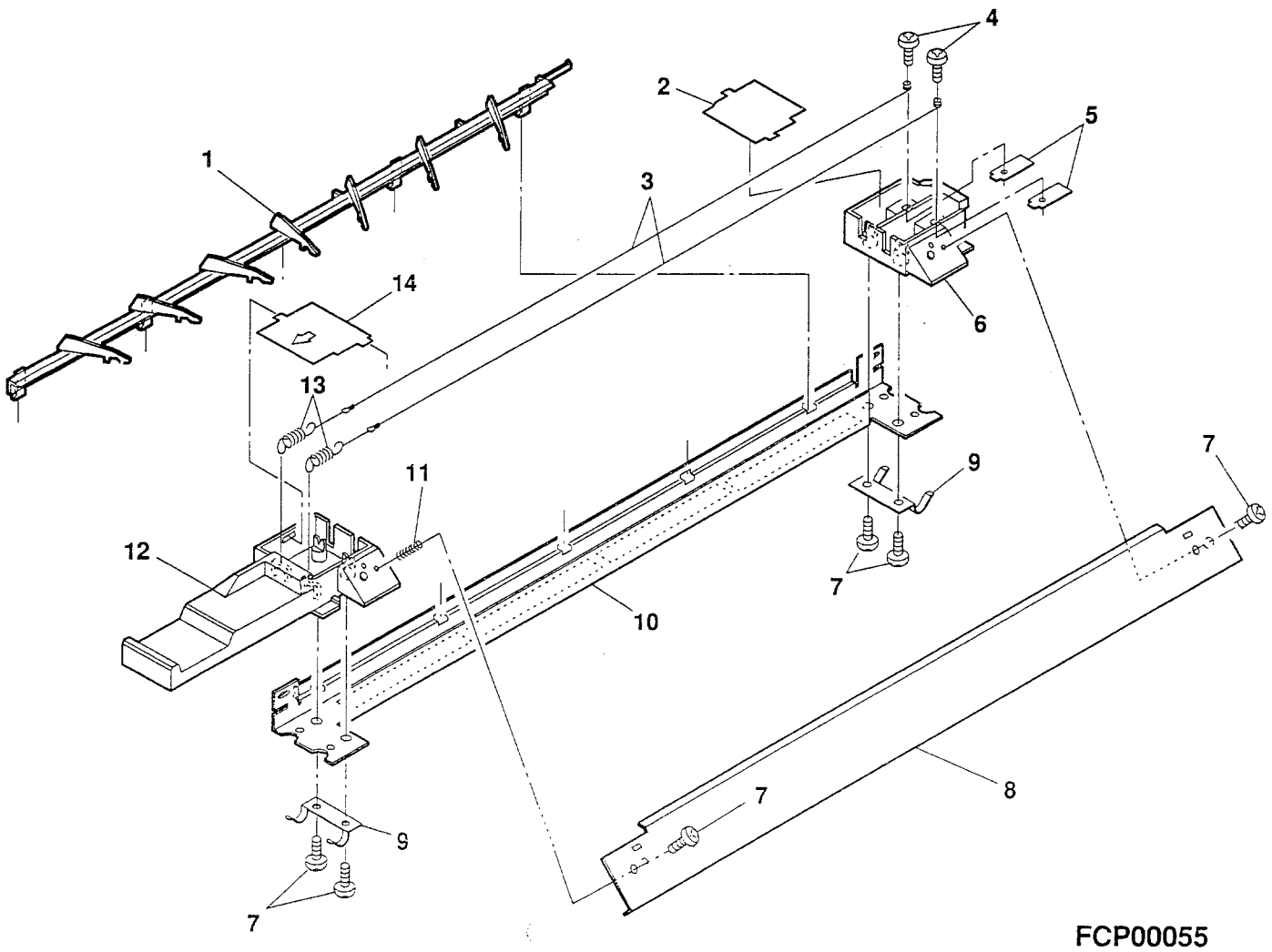
25 TCケースユニット(TC case unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	PGiDM1342FCZZ	AE	DS	N	C	AC guide	ACガイド B9
2	PCOVP1135FCZZ	AB	DD	N	C	TC cover R	TCカバーR B9
3	DWiR-0466CSZZ	BG	HC		A	Charger wire	チャージャーセン
4	XBPSD30P06000	AA	DD		C	Screw (3×6)	ビス
5	QSLP-0156FCZZ	AC	DJ	N	C	TC,AC electrode	TC,ACデンキョク
6	LHLDZ1084FCZZ	AE	DS	N	C	TC holder R	TCホルダーR
7	XEBSD30P06000	AA	DD		C	Screw (3×6)	ビス
8	CGiDM1358FC01	AN	EG	N	C	TC guide	TCガイド
9	MSPRP1933FCZZ	AC	DD	N	C	Charger case plate spring	チャージャーケースイタバネ
10	PCASZ0235FCZZ	AL	EB	N	C	TC case	TCケース B9
11	MSPRP1550FCZZ	AA	DD		C	TC spring	TC スプリング
12	LHLDZ1083FCZZ	AF	DS	N	C	TC holder F	TCホルダーF
13	MSPRT0513FCZZ	AA	DD		B	MC tension spring	MC テンションバネ
14	PCOVP1134FCZZ	AB	DD	N	C	TC cover F	TCカバーF B9
	ユニット (Unit)						
901	CCASZ0235FC51	AZ	GD	N	E	TC case unit	TCケース ユニット



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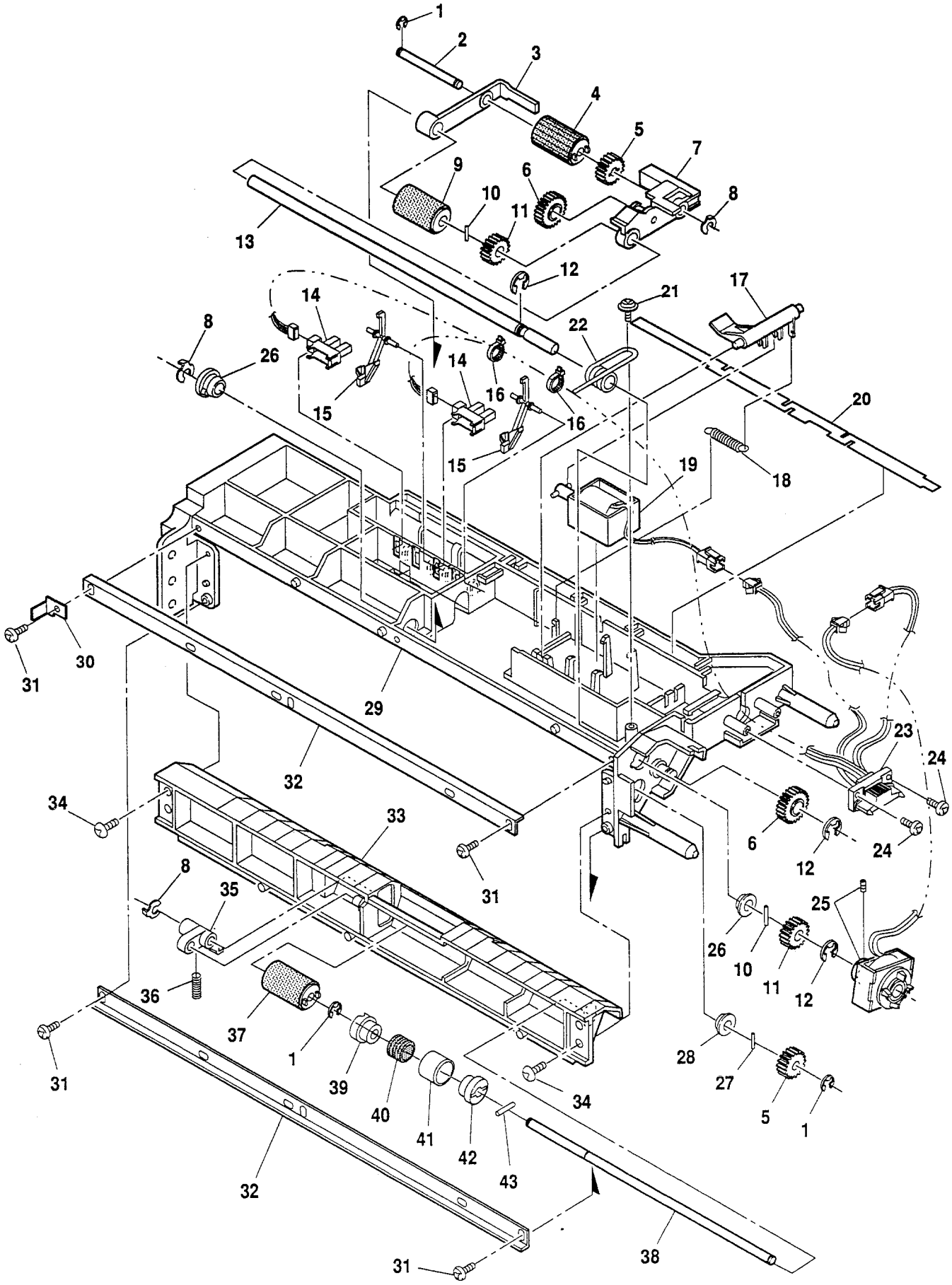
26 500カセット給紙ユニット(500 cassette paper feeding unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XRESP50-06000	AA	DD		C	E type ring	Eリング
2	NSFTZ1766FCZZ	AD	DJ	N	C	Pick up roller shaft	ピックアップローラーシャフト
3	MLEVP0589FCZZ	AC	DD	N	C	Pick up roller lever L	ピックUPローラーレバー L
4	NROLR0920FCZZ	AK	EB	N	C	Pick up roller	ピックアップローラー
5	NGERH0863FCZZ	AB	DD	N	C	Pick up roller gear 18T	ピックUPローラーギヤー18T
6	NGERH0862FCZZ	AB	DD	N	C	Idle gear 20T	アイドルギヤー20T
7	MLEVP0586FCZZ	AC	DJ	N	C	Pick up roller lever R	ピックUPローラーレバー R
8	LSTPP0279FCZZ	AB	DD	N	C	Stopper	ストッパー
9	NROLR0901FCZZ	AR	EZ	N	C	Paper feeding roller	キュウシローラー B9
10	LPINS0096FCZZ	AB	DD		C	Pin (3×12)	ヘイコウピン
11	NGERH0861FCZZ	AB	DD	N	C	Paper feed roller gear 18T	キュウシローラーギヤー18T
12	XRESP70-08000	AA	DD		C	E type ring	Eリング
13	NSFTZ1764FCZZ	AM	EG	N	C	Paper feeding roller shaft	キュウシローラシャフト
14	VHPGP1A71A1-1	AG	DX		B	Photo transistor (GP1A71A1)	フォトトランジスター
15	MLEVP0601FCZZ	AC	DJ	N	C	Sensor lever	センサーレバー
16	LBNDJ0043FCZZ	AA	DD		C	Snap band (SG-130)	スナップバンド
17	MLEVP0588FCZZ	AB	DD	N	C	Solenoid lever	ソレノイドレバー
18	MSPRC1942FCZZ	AB	DD	N	C	Solenoid lever spring	ソレノイドレバースプリング
19	RPLU-0278FCZZ	AQ	EQ	N	B	Pick up solenoid	ピックアップソレノイド
20	PCOVP1154FCZZ	AD	DJ	N	C	Cover	フセンカバー
21	XEPSD30P08X00	AA	DD		C	Screw (3×8X)	ビス
22	MSPRC2012FCZZ	AD	DJ	N	C	Brake spring	ブレーキスプリング
23	DHAi-2049FCZZ	AQ	EZ	N	C	Paper feeding harness 1.2	キュウシハーネス1.2
24	XEBSD30P12000	AA	DD		C	Screw (3×12)	ビス
25	PCLC-0208FCZZ	AW	FQ	N	C	Spring clutch	スプリングクラッチ
26	NBRGC0167FCZZ	AB	DD		C	PF bearing	PFジクウケ
27	LPINS0134FCZZ	AB	DD		C	Pin (2-12)	ヘイコウピン
28	NBRGC0457FCZZ	AD	DJ	N	C	Bearing	ジクウケ
29	CBRC-0048FC01	AS	FG	N	C	Main bracket	メインブラケット
30	QEARB0054FCZZ	AC	DD	N	C	Earth spring	アーススプリング
31	XEBSD30P08000	AA	DD		C	Screw (3×8)	ビス
32	LPLTM4057FCZZ	AF	DS	N	C	Reinforce plate	ホキョウバン B9
33	PGIDM1344FCZZ	AM	EG	N	C	Lower guide	シタガイド
34	XEBSD40P10000	AA	DD		C	Screw (4×10)	ビス
35	CLEVP0587FC01	AE	DJ	N	C	Roller lever	ギャクテンローラーレバー
36	MSPRC1943FCZZ	AB	DD	N	C	Roller lever spring	ギャクテンローラーレバースプリング
37	NROLR0902FCZZ	AK	EB	N	C	Roller	ギャクテンローラー
38	NSFTZ1765FCZZ	AH	DX	N	C	Roller shaft	ギャクテンローラシャフト
39	CCLR-0372FC01	AH	DX	N	C	Collar	ショウゲツカラー
40	MSPRC1969FCZZ	AF	DS	N	C	Spring	トルクリミッタースプリング
41	PCOVP1142FCZZ	AC	DD	N	C	Cover	カバートルクリミッターカバー
42	PCLR-0373FCZZ	AC	DD	N	C	Collar	ジュシカラー
43	XPSSJ20-15000	AA	DD	N	C	Pin	ピン
	ユニット (Unit)						
901	DUNT-6546FCZZ	BQ	MJ	N	E	500 Cassette paper feeding unit	500カセットキュウシユニット

26 500カセット給紙ユニット(500 cassette paper feeding unit)



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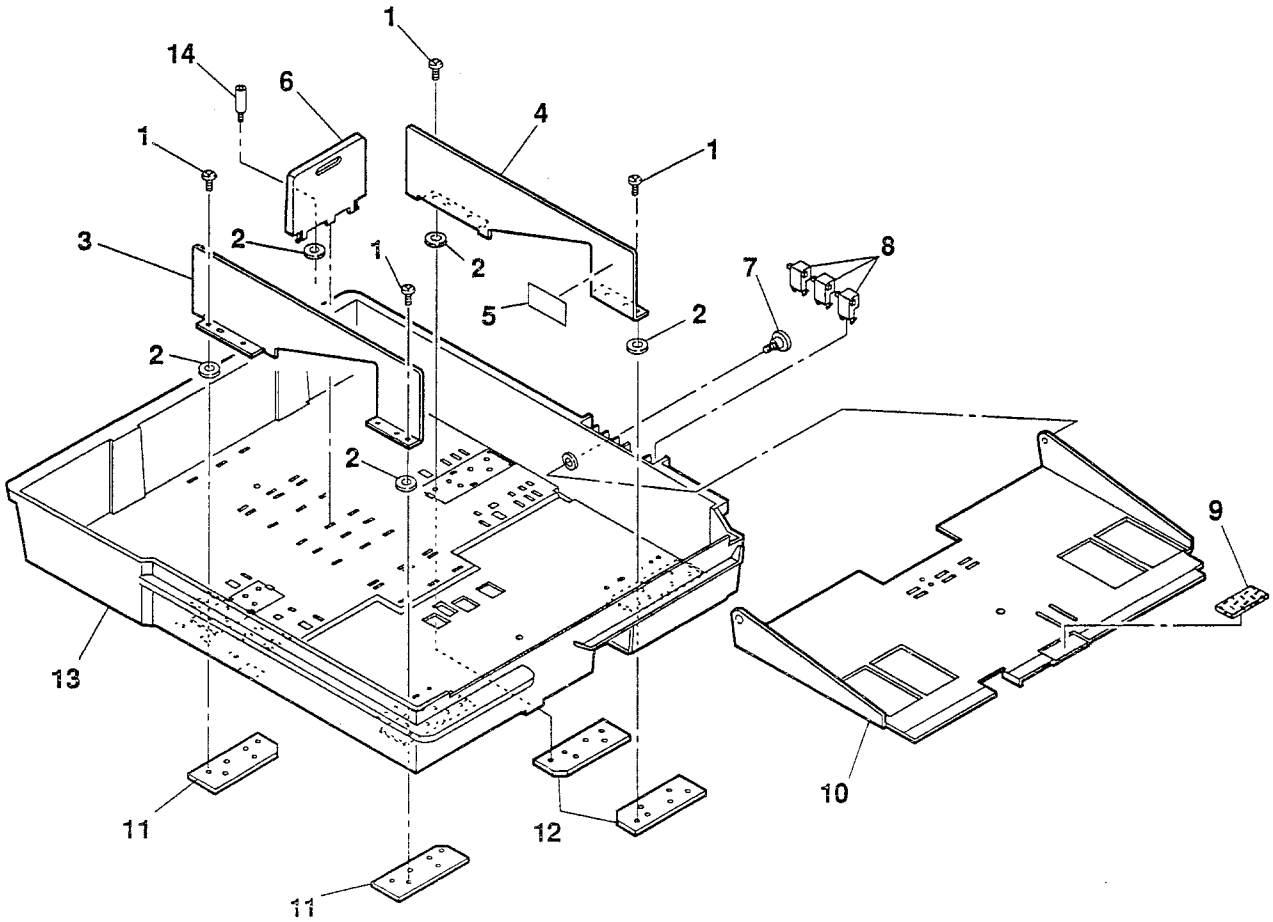
27 インナーカセット(Inner Cassette)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	XBPSD40P08000	AA	DD		C	Screw (4×8)	ビス
2	LX-WZ0317FCZZ	AA	DD	N	C	Washer	ワッシャ
3	LPLTM4039FCZZ	AL	EB	N	C	Side plate F	ソクバンF B9-C
4	CPLTM4040FC01	AP	EQ	N	C	Side plate R	ソクバンR B9-C
5	TLABZ3090FCZZ	AB	DD	N	C	Indicator label	シジセンラベル B9
6	LPLTP4023FCZZ	AD	DJ	N	C	Rear plate	コウタンバン
7	LX-BZ0138FCZZ	AB	DD		C	Screw	ダンビス
8	LDAiU0449FCZZ	AC	DJ	N	C	Cassette size detection block	サイズケンチブロック
9	PSHEZ3130FCZZ	AB	DD	N	C	Rotation plate sheet	カイテンイタシートクラリノ
10	LPLTM4041FCZZ	AT	FQ	N	C	Rotation plate	カイテンバン B9-C
11	LPLTM4042FCZZ	AF	DS	N	C	Side plate fixing plate	ソクバンコテイバン
12	LPLTM4042FCZ1	AG	DX	N	C	Side plate fixing plate R	ソクバンコテイイタ R
13	GCASP0154FCZZ	AY	GD	N	D	Inner cassette case	インナーカセットホンタイ
14	LX-BZ0108FCZZ	AC	DD		C	Screw	ビス
	ユニット (Unit)						
901	CCASP0154FC31	BF	HG	N	E	A3 inner cassette unit (AB series)	インナーカセット ユニット A3
	CCASP0154FC32	BF	HG	N	E	W-LT inner cassette unit (inch series)	インナーカセット ユニット Wレター



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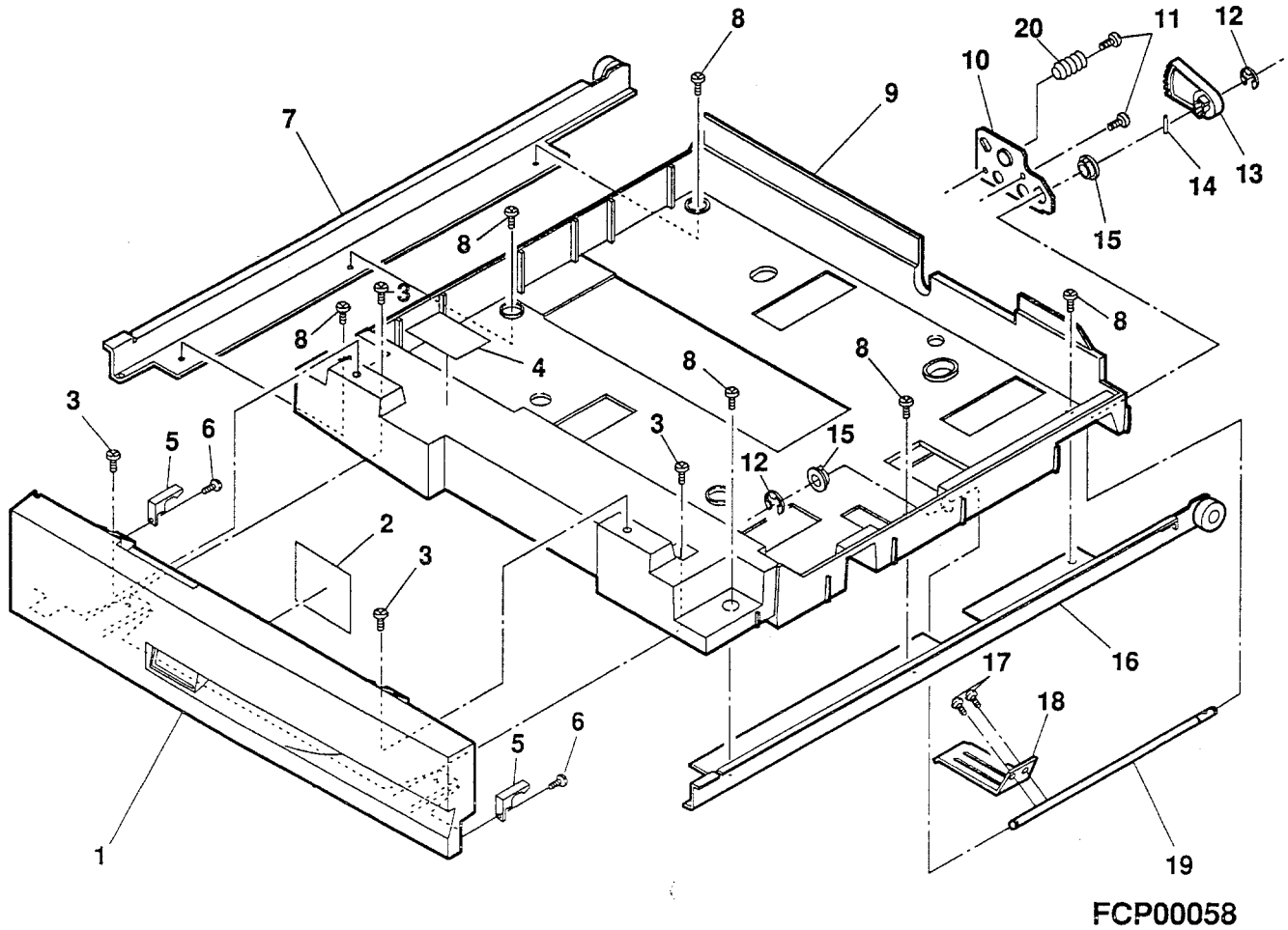
28 カセットドロアーユニット(Cassette drawer unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	JHNDP0107FCZZ	AW	FQ	N	C	Cassette handle	カセットトッテ B9
2	LPLTP4070FCZZ	AM	EG	N	C	Cassette size display plate A3 (Japan only)	サイズヒョウジバン A3
	LPLTP4070FCZ1	AK	EB	N	C	Cassette size display plate A3 (Export··AB series)	サイズヒョウジバン A3
	LPLTP4070FCZ2	AK	EB	N	C	Cassette size display plate W−LT (inch series)	サイズヒョウジバン Wレター
3	XBTSC40P08000	AA	DD		C	Screw (4×8)	ビス
4	TLABZ3105FCZZ	AD	DJ	N	C	Cassette instruction label	カセットセツメイラベル
5	PTME−0223FCZZ	AD	DJ	N	C	Cassette lock pawl	カセットロックツメ
6	XEPSD40P10000	AA	DD		C	Screw (4×10)	ビス
7	CRALM0098FC01	AR	EZ	N	C	Cassette rail L	カセットレール L
8	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
9	GCASP0155FCZZ	BA	GJ	N	D	Drawer case	ドロアホンタイ
10	LPLTM4044FCZZ	AF	DS	N	C	Drawer base plate	ドロアベースバン
11	XEBSD40P10000	AA	DD		C	Screw (4×10)	ビス
12	XRESP60−08000	AA	DD		C	E type ring	Eリング
13	NGERH0859FCZZ	AD	DJ	N	C	Gear	センケイギヤー
14	LPINS0157FCZZ	AB	DD		C	Pin (φ3L14)	ヘイコウピン
15	NBRGC0167FCZZ	AB	DD		C	PF bearing	PFジクウケ
16	CRALM0097FC01	AR	EZ	N	C	Cassette rail R	カセットレール R
17	XBPSD30P08000	AA	DD		C	Screw (3×8)	ビス
18	LPLTM4043FCZZ	AF	DS	N	C	Lift plate	リフトプレート B9C
19	NSFTZ1760FCZZ	AM	EG	N	C	Lift shaft	リフトシャフト B9
20	QEARB0056FCZZ	AA	DD	N	C	Earth spring	500カセアーススプリング
22	PMAGT0072FCZZ	AF	DS	N	C	Magnet catch	マグネットキャッチ



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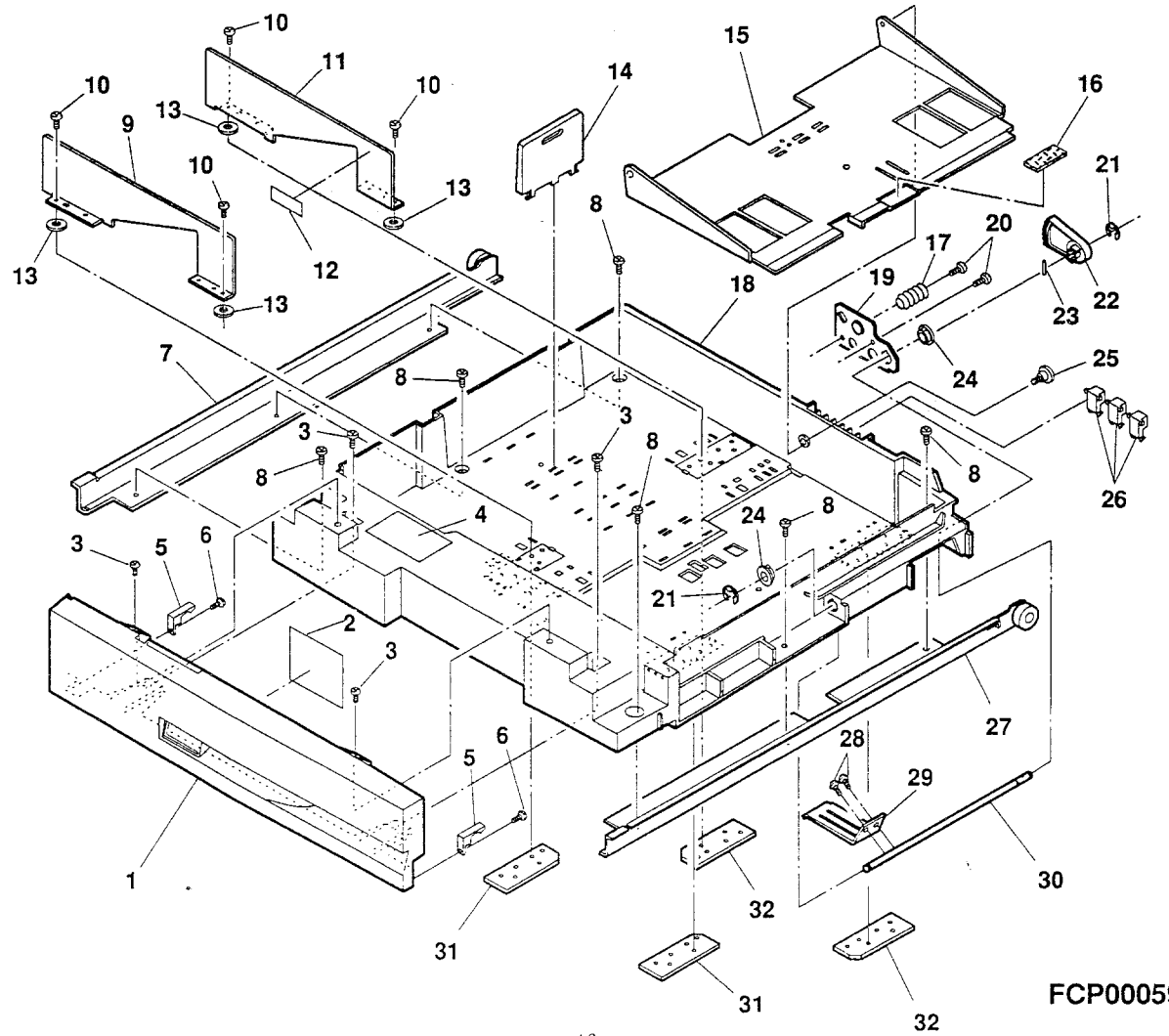
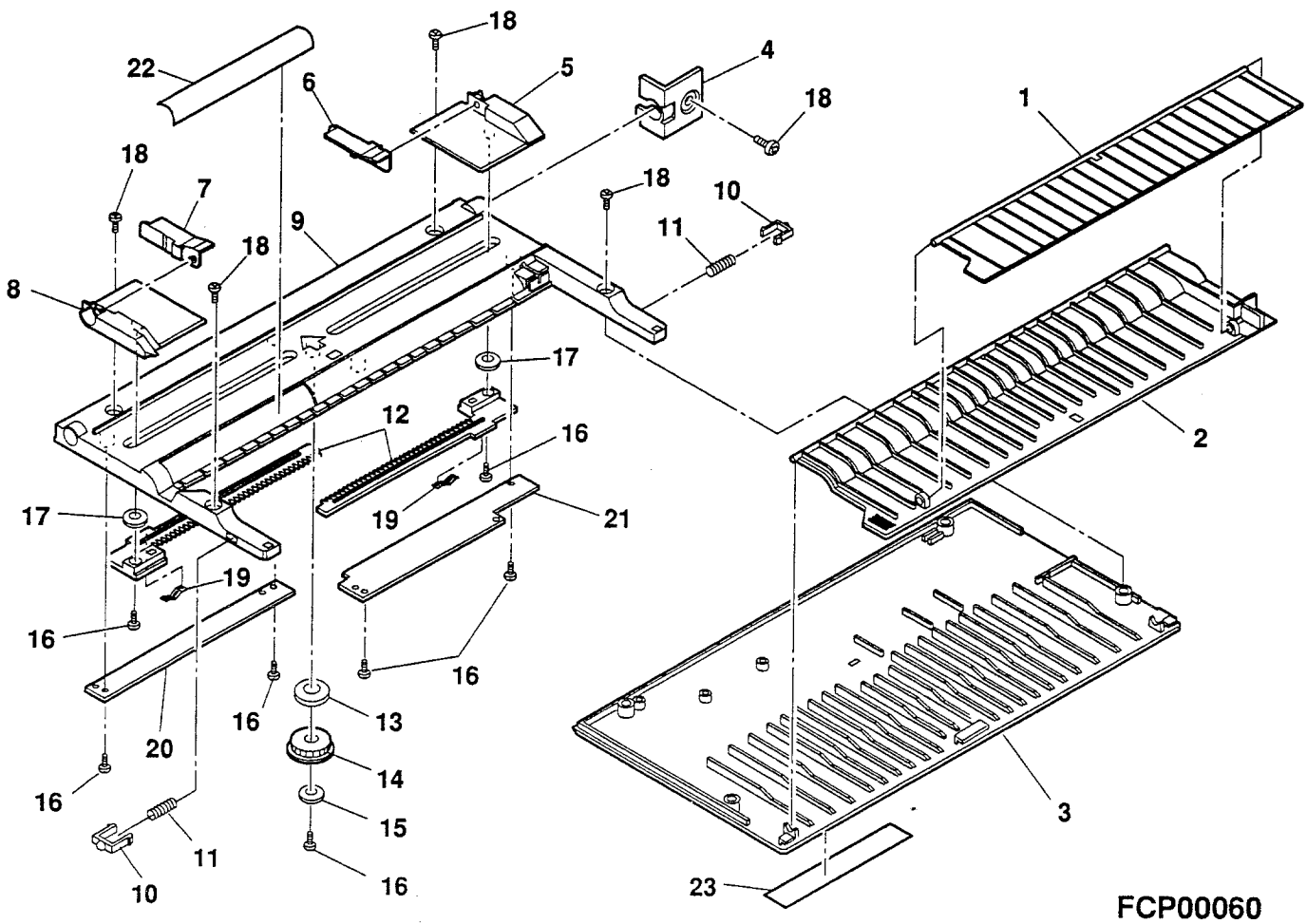
29 カセット一体ドロアーユニット(国内専用)(Cassette assembly drawer unit(Japan only))

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	JHNDP0107FCZZ	AW	FQ	N	C	Cassette handle	カセットトッテ B9
2	LPLTP4070FCZZ	AM	EG	N	C	Cassette size display plate	サイズヒョウジイタ
3	XBTSC40P08000	AA	DD		C	Screw (4×8)	ビス
4	TLABZ3105FCZZ	AD	DJ	N	C	Cassette instruction label	カセットセツメイラベル
5	PTME-0223FCZZ	AD	DJ	N	C	Cassette lock pawl	カセットロックツメ
6	XEPSD40P10000	AA	DD		C	Screw (4×10)	ビス
7	CRALM0111FC01	AQ	EZ	N	C	Cassette rail L(small)	カセットレール L(ショウ)
8	XBPSD40P06000	AA	DD		C	Screw (4×6)	ビス
9	LPLTM4039FCZZ	AL	EB	N	C	Side plate F	ソクバンF B9-C
10	XBPSD40P08000	AA	DD		C	Screw (4×8)	ビス
11	CPLTM4040FC01	AP	EQ	N	C	Side plate R	ソクバンR B9-C
12	TLABZ3020FCZZ	AC	DD		C	Label	シジセンラベル N1
13	LX-WZ0317FCZZ	AA	DD	N	C	Washer	ワッシャ
14	LPLTP4023FCZZ	AD	DJ	N	C	Rear plate	コウタンバン
15	LPLTM4041FCZZ	AT	FQ	N	C	Rotation plate	カイテンバン B9-C
16	PSHEZ3130FCZZ	AB	DD	N	C	Rotation plate sheet	カイテンイタシートクラリーノ
17	QEARB0056FCZZ	AA	DD	N	C	Earth spring	500カセアーススプリング
18	GCASP0156FCZZ	BB	GN	N	D	Cassette drawer case	カセットイッタイドロアケース
19	LPLTM4044FCZZ	AF	DS	N	C	Drawer base plate	ドロアベースバン
20	XEBSD40P10000	AA	DD		C	Screw (4×10)	ビス
21	XRESP60-08000	AA	DD		C	E type ring	Eリング
22	NGERH0859FCZZ	AD	DJ	N	C	Gear	センケイギヤ
23	LPiNS0157FCZZ	AB	DD		C	Pin (φ3L14)	ヘイコウピン
24	NBRGC0167FCZZ	AB	DD		C	PF bearing	PFジクウケ
25	LX-BZ0138FCZZ	AB	DD		C	Screw	ダンビス
26	LDAiU0449FCZZ	AC	DJ	N	C	Cassette size detection block	サイズケンチブロック
27	CRALM0110FC01	AQ	EZ	N	C	Cassette rail R(small)	カセットレール R(ショウ)
28	XBBSD30P08000	AA	DD		C	Screw (3×8)	ビス
29	LPLTM4043FCZZ	AF	DS	N	C	Lift plate	リフトプレート B9C
30	NSFTZ1760FCZZ	AM	EG	N	C	Lift shaft	リフトシャフト B9
31	LPLTM4042FCZZ	AF	DS	N	C	Side plate fixing plate	ソクバンコテイバン
32	LPLTM4042FCZ1	AG	DX	N	C	Side plate fixing plate R	ソクバンコテイバン R
	ユニット (Unit)						
901	CCASP0156FC31	BR	MW	N	E	B5 Cassette drawer case unit (Japan only)	B5カセット1ドロアケースユニット



30 手差しマルチトレイユニット(Manual paper feeding tray unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	LSOU-0102FCZZ	AG	DX	N	C	Tray 3	トレイ3
2	LSOU-0101FCZZ	AN	EQ	N	C	Tray 2	トレイ2
3	LSOU-0100FCZZ	AQ	EZ	N	C	Manual feed tray lower	テサシトレイ シタ
4	LHLDZ1090FCZZ	AC	DJ	N	C	Manual feed tray fulcrum holder R	テサシトレイシテンホルダーR
5	PGiDM1349FCZZ	AD	DJ	N	C	Manual feed guide A R	テサシガイド A R
6	PGiDM1351FCZZ	AD	DJ	N	C	Manual feed guide B R	テサシガイド B R
7	PGiDM1352FCZZ	AD	DJ	N	C	Manual feed guide B L	テサシガイド B L
8	PGiDM1350FCZZ	AD	DJ	N	C	Manual feed guide A L	テサシガイド A L
9	LSOU-0099FCZZ	AP	EQ	N	C	Manual feed tray upper	テサシトレイ ウエ
10	PTME-0222FCZZ	AC	DJ	N	C	Lock pawl	ロックツメ
11	MSPRC1968FCZZ	AA	DD	N	C	Lock spring	ロックスプリング
12	NGERR0878FCZZ	AD	DJ	N	C	Manual feeding gear	テサシラックB9
13	PSHEZ1760FCZZ	AB	DD		C	Manual feed gear brake sheet	テサシギヤーブレーキシート
14	NGERH0193FCZZ	AB	DD		C	UC manual feed gear	UCテサシギヤー
15	XWHSD30-08100	AA	DD		C	Washer	ワッシャ
16	XEBSD30P06000	AA	DD		C	Screw (3×6)	ビス(Pタイト)
17	XWHSD30-05070	AA	DD		C	Washer	ワッシャ
18	XEBSD30P08000	AA	DD		C	Screw (3×8)	ビス
19	QCNTM1043CCZZ	AB	DD		C	Slide switch contact	スライドスイッチヨウ セッショクタンシ
20	LPLTK4188FCZZ	AD	DJ	N	C	Guide adjusting plate 1	ガイドカジュチョウセイイタ1
21	LPLTK4189FCZZ	AE	DS	N	C	Guide adjusting plate 2	ガイドカジュチョウセイイタ2
22	TLABZ3086FCZZ	AC	DD	N	C	Manual feed size label (Japan only)	テサシサイズラベル]
	TLABZ3088FCZZ	AC	DD	N	C	Manual feed size label (inch series)	テサシサイズラベル
	TLABZ3087FCZZ	AC	DD	N	C	Manual feed size label (Export··AB series)	テサシサイズラベル
23	TLABZ3149FCZZ	AC	DD	N	C	Manual feed size assistance label (Japan only)	テサシサイズホジョラベル]
	TLABZ3151FCZZ	AC	DD	N	C	Manual feed size assistance label (inch series)	テサシサイズホジョラベル
	TLABZ3150FCZZ	AC	DD	N	C	Manual feed size assistance label (Export··AB series)	テサシサイズホジョラベル
	ユニット (Unit)						
901	CSOU-0099FC31	BB	GN	N	E	Manual paper feeding multi tray unit (Japan only) (SF-2022,SF-2022H)	テサシマルチトレイユニット J
	CSOU-0099FC33	BD	GX	N	E	Manual paper feeding multi tray unit (inch series)	テサシマルチトレイユニット
	CSOU-0099FC32	BD	GX	N	E	Manual paper feeding multi tray unit (AB series)	テサシマルチトレイユニット
	CSOU-0099FC34	BD	GX	N	E	Manual paper feeding multi tray unit (Japan only) (SF-2027,SF-2027H)	テサシマルチトレイユニット



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31 手差しマルチ給紙ユニット(Manual multi paper feeding unit)

NO.	PARTS CODE	PRICE RANK Ex	PRICE RANK Ja	NEW MARK	PART RANK	DESCRIPTION	
1	DHAi-2055FCZZ	AK	EB	N	C	Manual feed multi interface harness	テサシマルチチュウケイハーネス
2	LBNDJ0013FCZZ	AA	DD		C	Wire band	ワイヤーバンド
3	MSPRC1318FCZZ	AA	DD		C	Spring B	テサシスプリングB
4	RPLU-0279FCZZ	AN	EG	N	B	Manual feeding solenoid	テサシソレノイドB9
5	MLEVP0484FCZZ	AB	DD		C	Manual paper feeding lever	テサシラッチ
6	PTME-0178FCZZ	AC	DD		C	Manual paper feeding pawl A	テサシラッチ A
7	MSPRC1317FCZZ	AA	DD		C	Spring A	テサシスプリングA
8	PSHEP2511FCZZ	AB	DD	N	C	Manual feeding sheet C	テサシマイラーC
9	LFRM-0745FCZZ	AE	DJ	N	C	Manual feed solenoid frame	テサシソレノイドフレーム
10	XHBSD30P06000	AA	DD		C	Screw (3×6)	ビス(Sタイト)
11	XHBSD40P10000	AA	DD		C	Screw (4×10)	ビス
12	PGiDM1373FCZZ	AF	DS	N	C	Manual feed paper guide M	テサシペーパーガイド M
13	MARMP0116FCZZ	AC	DJ		C	Manual paper feed arm A	テサシアーム A B7
14	LSTPP0278FCZZ	AC	DD	N	C	Manual feed stopper	テサシストッパーB9
15	MLEVP0609FCZZ	AC	DD	N	C	MF PE lever	テサシPEアクチエータ
16	VHPGP1A71A1-1	AG	DX		B	Photo sensor (GP1A71A1)	フォトセンサー
17	LHLDZ1089FCZZ	AC	DJ	N	C	Manual feed tray fulcrum holder F	テサシトレイシテンホルダーF
18	XHBSD30P08000	AA	DD		C	Screw (3×8)	ビス
19	XHBSD40P12000	AA	DD	N	C	Screw (4×12)	ビス
20	CFRM-0743FC01	AG	DX	N	C	Manual feeding frame F	テサシフレームF
21	MLEVP0592FCZZ	AC	DD	N	C	Release lever A	アツカイジョレバーA
22	MLEVP0593FCZZ	AC	DD	N	C	Release lever B	アツカイジョレバーB
23	XEBSD30P06000	AA	DD		C	Screw (3×6)	ビス
24	PGiDH1361FCZZ	AP	EQ	N	C	Manual feeding paper guide upper	テサシペーパーガイドウエ B9
25	XRESP40-06000	AA	DD		C	4E-Type ring	Eリング
26	NBRGP0266FCZZ	AA	DD		C	Bearing (φ5)	ジクウケ
27	MSPRC1442FCZZ	AB	DD		C	Roller spring	ローラーホジョスプリング
28	CROLP0921FC01	AM	EG	N	C	Manual feed take-up roller	テサシヨビコミローラ
29	NGERH0892FCZZ	AB	DD	N	C	16T gear	16Tギヤー
30	LPiNS0165FCZZ	AB	DD		C	Pin (02×8)	ヘイコウピン
31	NGERH0495FCZZ	AC	DD		C	Gear (20T)	ギヤー
32	MARMP0118FCZZ	AC	DJ		C	Manual paper feed arm C	テサシアーム C B7
33	NROLR0922FCZZ	AR	EZ	N	C	Manual paper feed roller	テサシローラーB9
34	MARMP0117FCZZ	AD	DJ		C	Manual paper feed arm B	テサシアーム B B7
35	NSFTZ1774FCZZ	AH	DX	N	C	Manual feed roller shaft	テサシローラージク
36	CFRM-0744FC01	AM	EG	N	C	Manual feeding frame R	テサシフレームR
37	LBOSZ1125FCZZ	AC	DD		C	Manual feed Clutch boss	テサシクラッチボス
38	PPiPP0124FCZZ	AB	DD		C	Manual feed CL sleeve	テサシCLスリーブ
39	MSPRC1544FCZZ	AE	DS		C	Manual feed Clutch spring	テサシクラッチスプリング
40	LBOSZ1124FCZZ	AF	DS		C	Manual feed CL boss 36T	テサシCLボス 36T
41	NGERH0864FCZZ	AC	DD	N	C	Gear 24T	ニュウリョクギヤー24
42	PRNGP0019FCZZ	AA	DD		C	V ring (GTW-6)	Vリング
43	LBOSZ0979FCZZ	AF	DS		C	Clutch boss A	テサシクラッチボス A
44	MSPRC1315FCZZ	AD	DJ		C	Clutch spring A	テサシクラッチスプリングA
45	PPiPP0109FCZZ	AB	DD		C	Pipe A	テサシクラッチスリーブAパイプ
46	PGiDH1362FCZZ	AM	EG	N	C	Manual feeding paper guide lower	テサシペーパーガイドシタ B9
47	XRESP30-06000	AA	DD		C	E type ring	Eリング
48	NSFTZ1806FCZZ	AD	DJ	N	C	Pressure plate shaft	アツセツバンジク
49	LFRM-0746FCZZ	AC	DD	N	C	Joint frame	レンケツフレーム B9
50	PSHEZ3143FCZZ	AB	DD	N	C	Manual feed sheet	テサシシートB9
51	LX-BZ0659FCZZ	AB	DD		C	Screw	ビス
52	MSPRC1947FCZZ	AA	DD	N	C	Pressure plate spring	アツセツバンスプリング
54	LPLTP4026FCZZ	AD	DJ	N	C	Roller pressure plate	ギャクテンローラーアツセツイタ
55	LSTPP0274FCZZ	AA	DD	N	C	Reversing roller stopper	ギャクテンローラストッパー
56	CSFTZ1771FC31	AT	FG	N	E	Reversing roller shaft unit	ギャクテンローラジクユニット
	ユニット (Unit)						
901	DUNT-6547FCZZ	BQ	MJ	N	E	Manual paper feeding multi PS unit	テサシマルチキュウシユニット

S H A R P

Date Revised : July 6, 1999
Date Issued : June 20, 1995

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-3363

Section 1. Product Identification

Product :
SF-222ND3 / SF-222DV3 / SF-222SD3 (Blue Developer) For use with : SF-2022, SF-2027

Section 2. Supplier's Name and Address

Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan
Local suppliers are listed below. Please contact the nearest supplier for additional information.

(Country)	(Name and Telephone Number)
U.S.A.	Sharp Electronics Corporation Telephone number for information : 1-800-237-4277 Emergency telephone number : 1-800-255-3924
Canada	Sharp Electronics of Canada Ltd. Telephone number for information : 905-890-2100 Emergency telephone number : 1-800-255-3924
United Kingdom	Sharp Electronics (U.K.) Ltd. Telephone number for information : 01923-474013

Section 3. Ingredients

Ingredients	CAS No.	Proportion	OSHA PEL	ACGIH TLV	Other Limits
Ferrite carrier		>94.0%	Not listed	Not listed	None
Iron oxide	1309-37-1				
Copper oxide	1317-38-0				
Zinc oxide	1314-13-2				
Styrene-Acrylate copolymer	25767-47-9	<5.0%	Not listed	Not listed	None

Section 4. Hazardous Identification (Emergency Overview)

Based on our tests, it does not present acute health hazard.

Section 5. Health Hazard Data

Route(s) of Entry : **Inhalation?** Yes; **Skin?** No; **Ingestion?** Possible but very unusual.

Health Hazards : The toner, which is included in this developer, has been tested on “Acute oral toxicity” and “Ames test” .

Carcinogenicity : NTP? No; IARC Monographs? No; OSHA Regulated? No

Signs and Symptoms of Exposure : Minimum irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : Accumulation of dust in the respiratory system.

Emergency and First Aid Procedures :

Skin contact ; Wash thoroughly with soap and water.
Eye contact ; In case of contact, immediately flush eyes with water for 5 minutes.
Inhalation ; Remove to fresh air if effects occur, consult local medical personnel.
Ingestion ; Dilute stomach contents with several glasses of water.
If unsuccessful, get medical attention.

S H A R P

Date Revised : July 6, 1999
Date Issued : June 20, 1995

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-3363

Section 6. Physical Chemical Characteristics

Boiling / Melting Point	:	Not applicable	**Specific Gravity**	:	about 5g/cm^3
Vapor Pressure	:	Not applicable	**Solubility in Water**	:	Negligible
Vapor Density	:	Not applicable	**PH**	:	Not applicable
Evaporation Rate	:	Not applicable	**Viscosity**	:	Not applicable
Appearance	:	Fine powder	**Color**	:	Dark blue
Odor	:	Odorless			

Section 7. Fire and Explosion Data

Flash Point (Method Used)	:	Not applicable.
Ignition Temperature	:	>350 degree.
Flammable Limits	:	(LEL); Not available. (UEL); Not available.
Extinguishing Media	:	CO_2, dry chemical, foam or water.
Special Fire Fighting Procedure	:	This material will burn in the case of fire. The decomposition products are CO, CO_2 and NOx
Unusual Fire and Explosion Hazard	:	This material has no unusual fire or explosion hazards.

Section 8. Reactivity Data

Stability	:	Stable
Incompatibility (Material to Avoid)	:	None.
Hazardous Decomposition	:	CO, CO_2, and NOx.
Hazardous Polymerization	:	Will not occur.

Section 9. Precautions for Safe Handling and Use

Personal Protection Information (Respiratory, Eye Protection and Protective Glove):		None required under normal use. Protective Gloves: None required under normal use. Eye Protection: None required under normal use.
Engineering Control / Ventilation	:	Under normal use condition, local exhaust is not needed. Adequate mechanical (general) ventilation is needed.
Other Protective Clothing or Equipment	:	None required under normal use.
Work / Hygienic Practice	:	Inhalation should be avoided.
Steps to be taken in case of Spill or Leak	:	Sweep up or clean up with a vacuum cleaner.
Waste Disposal Method	:	Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

Section 10. Regulatory Information

NFPA Rating (U.S.A.)	:	Health = 1 Flammability = 1 Reactivity = 0
WHMIS Legislation (Canada)	:	This product is not a controlled product.
Transport Information	:	This product is not a hazardous material.
UN No.	:	None allocated.

Section 11. Other Information

Not applicable.

S H A R P

Date Revised : July 6, 1999
Date Issued : June 20, 1995

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-3362

Section 1. Product Identification

Product :
SF-222ND2 / SF-222DV2 / SF-222SD2 (Red Developer) For use with : SF-2022, SF-2027

Section 2. Supplier's Name and Address

Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan
Local suppliers are listed below. Please contact the nearest supplier for additional information.

(Country)	(Name and Telephone Number)
U.S.A.	Sharp Electronics Corporation Telephone number for information : 1-800-237-4277 Emergency telephone number : 1-800-255-3924
Canada	Sharp Electronics of Canada Ltd. Telephone number for information : 905-890-2100 Emergency telephone number : 1-800-255-3924
United Kingdom	Sharp Electronics (U.K.) Ltd. Telephone number for information : 01923 474013

Section 3. Ingredients

Ingredients	CAS No.	Proportion	OSHA PEL	ACGIH TLV	Other Limits
Ferrite carrier		>94.0%	Not listed	Not listed	None
Iron oxide	1309-37-1				
Copper oxide	1317-38-0				
Zinc oxide	1314-13-2				
Styrene-Acrylate copolymer	25767-47-9	<5.0%	Not listed	Not listed	None

Section 4. Hazardous Identification (Emergency Overview)

Based on our tests, it does not present acute health hazard.

Section 5. Health Hazard Data

Route(s) of Entry : **Inhalation?** Yes; **Skin?** No; **Ingestion?** Possible but very unusual.

Health Hazards : The toner, which is included in this developer, has been tested on “Acute oral toxicity” and “Ames test” .

Carcinogenicity : NTP? No; IARC Monographs? No; OSHA Regulated? No

Signs and Symptoms of Exposure : Minimum irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : Accumulation of dust in the respiratory system.

Emergency and First Aid Procedures :

Skin contact ; Wash thoroughly with soap and water.
Eye contact ; In case of contact, immediately flush eyes with water for 5 minutes.
Inhalation ; Remove to fresh air if effects occur, consult local medical personnel.
Ingestion ; Dilute stomach contents with several glasses of water.
If unsuccessful, get medical attention.

S H A R P

Date Revised : July 6, 1999
Date Issued : June 20, 1995

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-3362

Section 6. Physical Chemical Characteristics

Boiling / Melting Point	:	Not applicable	**Specific Gravity**	:	about 5g/cm^3
Vapor Pressure	:	Not applicable	**Solubility in Water**	:	Negligible
Vapor Density	:	Not applicable	**PH**	:	Not applicable
Evaporation Rate	:	Not applicable	**Viscosity**	:	Not applicable
Appearance	:	Fine powder	**Color**	:	Dark red
Odor	:	Odorless			

Section 7. Fire and Explosion Data

Flash Point (Method Used)	:	Not applicable.
Ignition Temperature	:	>350 degree.
Flammable Limits	:	(LEL); Not available. (UEL); Not available.
Extinguishing Media	:	CO_2, dry chemical, foam or water.
Special Fire Fighting Procedure	:	This material will burn in the case of fire. The decomposition products are CO, CO_2 and NOx
Unusual Fire and Explosion Hazard	:	This material has no unusual fire or explosion hazards.

Section 8. Reactivity Data

Stability	:	Stable
Incompatibility (Material to Avoid)	:	None.
Hazardous Decomposition	:	CO, CO_2, and NOx.
Hazardous Polymerization	:	Will not occur.

Section 9. Precautions for Safe Handling and Use

Personal Protection Information (Respiratory, Eye Protection and Protective Glove):		None required under normal use. Protective Gloves: None required under normal use. Eye Protection: None required under normal use.
Engineering Control / Ventilation	:	Under normal use condition, local exhaust is not needed. Adequate mechanical (general) ventilation is needed.
Other Protective Clothing or Equipment	:	None required under normal use.
Work / Hygienic Practice	:	Inhalation should be avoided.
Steps to be taken in case of Spill or Leak	:	Sweep up or clean up with a vacuum cleaner.
Waste Disposal Method	:	Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

Section 10. Regulatory Information

NFPA Rating (U.S.A.)	:	Health = 1 Flammability = 1 Reactivity = 0
WHMIS Legislation (Canada)	:	This product is not a controlled product.
Transport Information	:	This product is not a hazardous material.
UN No.	:	None allocated.

Section 11. Other Information

Not applicable.

S H A R P

Date Revised : July 6, 1999
Date Issued : June 20, 1995

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-0363

Section 1. Product Identification

Product :
SF-222NT3 / SF-222T3 / SF-222ST3 (Blue Toner) For use with : SF-2022, SF-2027

Section 2. Supplier's Name and Address

Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan
Local suppliers are listed below. Please contact the nearest supplier for additional information.

(Country)	(Name and Telephone Number)
U.S.A.	Sharp Electronics Corporation Telephone number for information : 1-800-237-4277 Emergency telephone number : 1-800-255-3924
Canada	Sharp Electronics of Canada Ltd. Telephone number for information : 905-890-2100 Emergency telephone number : 1-800-255-3924
United Kingdom	Sharp Electronics (U.K.) Ltd. Telephone number for information : 01923 474013

Section 3. Ingredients

Ingredients	CAS No.	Proportion	OSHA PEL	ACGIH TLV	Other Limits
Titanium dioxide	1317-80-2	<7%	10mg/m^3	10mg/m^3	None
Styrene-Acrylate copolymer	25767-47-9	>83%	Not listed	Not listed	None
Polypropylene	9003-07-0	< 2%	Not listed	Not listed	None
Organic pigment	147-14-8	<5%	Not listed	Not listed	None
Organic ammonium salt	102561-46-6	<3%	Not listed	Not listed	None

Section 4. Hazardous Identification (Emergency Overview)

Based on our tests, it does not present acute health hazard.

Section 5. Health Hazard Data

Route(s) of Entry : **Inhalation?** Yes; **Skin?** No; **Ingestion?** Possible but very unusual.

Health Hazards : This material has been on “Acute oral toxicity” and “Ames test” it does not represent a health hazard.

Carcinogenicity : NTP? No; IARC Monographs? No; OSHA Regulated? No

Signs and Symptoms of Exposure : Minimum irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : Accumulation of dust in the respiratory system.

Emergency and First Aid Procedures :

Skin contact ; Wash thoroughly with soap and water.
Eye contact ; In case of contact, immediately flush eyes with water for 5 minutes.
Inhalation ; Remove to fresh air if effects occur, consult local medical personnel.
Ingestion ; Dilute stomach contents with several glasses of water. If unsuccessful, get medical attention.

S H A R P

Date Revised : July 6, 1999
Date Issued : June 20, 1995

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-0363

Section 6. Physical Chemical Characteristics

Boiling / Melting Point	:	Not applicable	**Specific Gravity**	:	1.2g/cm^3
Vapor Pressure	:	Not applicable	**Solubility in Water**	:	Negligible
Vapor Density	:	Not applicable	**PH**	:	Not applicable
Evaporation Rate	:	Not applicable	**Viscosity**	:	Not applicable
Appearance	:	Fine powder	**Color**	:	Blue
Odor	:	Odorless			

Section 7. Fire and Explosion Data

Flash Point (Method Used)	:	Not applicable.
Ignition Temperature	:	>350 degree .
Flammable Limits	:	(LEL); Not available. (UEL); Not available.
Extinguishing Media	:	CO_2, dry chemical, foam or water.
Special Fire Fighting Procedure	:	This material will burn in the case of fire. The decomposition products are CO, CO_2 and NOx
Unusual Fire and Explosion Hazard	:	This material has no unusual fire or explosion hazards.

Section 8. Reactivity Data

Stability	:	Stable
Incompatibility (Material to Avoid)	:	None.
Hazardous Decomposition	:	CO, CO_2, and NOx.
Hazardous Polymerization	:	Will not occur.

Section 9. Precautions for Safe Handling and Use

Personal Protection Information (Respiratory, Eye Protection and Protective Glove):		None required under normal use. Protective Gloves: None required under normal use. Eye Protection: None required under normal use.
Engineering Control / Ventilation	:	Under normal use condition, local exhaust is not needed. Adequate mechanical (general) ventilation is needed.
Other Protective Clothing or Equipment	:	None required under normal use.
Work / Hygienic Practice	:	Inhalation should be avoided.
Steps to be taken in case of Spill or Leak	:	Sweep up or clean up with a vacuum cleaner.
Waste Disposal Method	:	Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

Section 10. Regulatory Information

NFPA Rating (U.S.A.)	:	Health = 1 Flammability = 1 Reactivity = 0
WHMIS Legislation (Canada)	:	This product is not a controlled product.
Transport Information	:	This product is not a hazardous material.
UN No.	:	None allocated.

Section 11. Other Information

Not applicable.

S H A R P

Date Revised : July 6, 1999
Date Issued : June 20, 1995

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-0362

Section 1. Product Identification

Product :
SF-222NT2 / SF-222T2 / SF-222ST2 (Red Toner) For use with : SF-2022, SF-2027

Section 2. Supplier's Name and Address

Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan
Local suppliers are listed below. Please contact the nearest supplier for additional information.

(Country)	(Name and Telephone Number)
U.S.A.	Sharp Electronics Corporation Telephone number for information : 1-800-237-4277 Emergency telephone number : 1-800-255-3924
Canada	Sharp Electronics of Canada Ltd. Telephone number for information : 905-890-2100 Emergency telephone number : 1-800-255-3924
United Kingdom	Sharp Electronics (U.K.) Ltd. Telephone number for information : 01923 474013

Section 3. Ingredients

Ingredients	CAS No.	Proportion	OSHA PEL	ACGIH TLV	Other Limits
Titanium dioxide	1317-80-2	<5%	10mg/m^3	10mg/m^3	None
Styrene-Acrylate copolymer	25767-47-9	>85%	Not listed	Not listed	None
Polypropylene	9003-07-0	< 2%	Not listed	Not listed	None
Organic pigment	6655-84-1	<6%	Not listed	Not listed	None
Organic ammonium salt	102561-46-6	<2%	Not listed	Not listed	None

Section 4. Hazardous Identification (Emergency Overview)

Based on our tests, it does not present acute health hazard.

Section 5. Health Hazard Data

Route(s) of Entry : **Inhalation?** Yes; **Skin?** No; **Ingestion?** Possible but very unusual.

Health Hazards : This material has been on “Acute oral toxicity” and “Ames test”
It does not represent a health hazard.

Carcinogenicity : NTP? No; IARC Monographs? No; OSHA Regulated? No

Signs and Symptoms of Exposure : Minimum irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : Accumulation of dust in the respiratory system.

Emergency and First Aid Procedures :

Skin contact ; Wash thoroughly with soap and water.
Eye contact ; In case of contact, immediately flush eyes with water for 5 minutes.
Inhalation ; Remove to fresh air if effects occur, consult local medical personnel.
Ingestion ; Dilute stomach contents with several glasses of water.
If unsuccessful, get medical attention.

S H A R P

Date Revised : July 6, 1999
Date Issued : Jun 20, 1995

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-0362

Section 6. Physical Chemical Characteristics

Boiling / Melting Point	:	Not applicable	**Specific Gravity**	:	1.2g/cm^3
Vapor Pressure	:	Not applicable	**Solubility in Water**	:	Negligible
Vapor Density	:	Not applicable	**PH**	:	Not applicable
Evaporation Rate	:	Not applicable	**Viscosity**	:	Not applicable
Appearance	:	Fine powder	**Color**	:	Red
Odor	:	Odorless			

Section 7. Fire and Explosion Data

Flash Point (Method Used)	:	Not applicable.
Ignition Temperature	:	>350 degree .
Flammable Limits	:	(LEL); Not available. (UEL); Not available.
Extinguishing Media	:	CO_2, dry chemical, foam or water.
Special Fire Fighting Procedure	:	This material will burn in the case of fire. The decomposition products are CO, CO_2 and NOx
Unusual Fire and Explosion Hazard	:	This material has no unusual fire or explosion hazards.

Section 8. Reactivity Data

Stability	:	Stable
Incompatibility (Material to Avoid)	:	None.
Hazardous Decomposition	:	CO, CO_2, and NOx.
Hazardous Polymerization	:	Will not occur.

Section 9. Precautions for Safe Handling and Use

Personal Protection Information (Respiratory, Eye Protection and Protective Glove):		None required under normal use. Protective Gloves: None required under normal use. Eye Protection: None required under normal use.
Engineering Control / Ventilation	:	Under normal use condition, local exhaust is not needed. Adequate mechanical (general) ventilation is needed.
Other Protective Clothing or Equipment	:	None required under normal use.
Work / Hygienic Practice	:	Inhalation should be avoided.
Steps to be taken in case of Spill or Leak	:	Sweep up or clean up with a vacuum cleaner.
Waste Disposal Method	:	Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

Section 10. Regulatory Information

NFPA Rating (U.S.A.)	:	Health = 1 Flammability = 1 Reactivity = 0
WHMIS Legislation (Canada)	:	This product is not a controlled product.
Transport Information	:	This product is not a hazardous material.
UN No.	:	None allocated.

Section 11. Other Information

Not applicable.

S H A R P

Data Revised : July 1, 1996
Date Issued : July 20, 1995

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-3361-1

Section 1. Product Identification

Product

SF-222ND1/ SD1/ DV1 (Black Developer) For use with : SF-2022, SF-2027

Section 2. Supplier's Name and Address

Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan
Local suppliers are listed below. Please contact the nearest supplier for additional information.

(Country)	(Name and Telephone Number)
U.S.A.	Sharp Electronics Corporation Telephone number for information : 1-800-237-4277 Emergency telephone number : 1-800-255-3924
Canada	Sharp Electronics of Canada Ltd. Telephone number for information : 905-890-2100 Emergency telephone number :1-800-255-3924
United Kingdom	Sharp Electronics (U.K.) Ltd. Telephone number for information : 01923 474013

Section 3. Ingredients

Ingredients	CAS No.	Proportion	OSHA PEL	ACGIH TLV	Other Limits
Carbon black	1333-86-4	<0.3%	3.5mg/m^3	3.5mg/m^3	None
Ferrite carrier		>94.0%	Not listed	Not listed	None
Iron oxide	1309-37-1				
Copper oxide	1317-38-0				
Zinc oxide	1314-13-2				
Styrene-Acrylate Copolymer	29497-14-1	<2.0%	Not listed	Not listed	None
Polystyrene	9003-53-6	<3.0%	Not listed	Not listed	None

Section 4. Hazardous Identification (Emergency Overview)

Developer is a black powder containing small amounts of toner, and possessing no immediate hazard.
There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner.

Section 5. Health Hazard Data

Route(s) of Entry :

Inhalation?	Skin?	Ingestion?
No	No	Possible but very unusual.

Health Hazards : Acute oral toxicity --- LD_{50} of this toner which is included in this Developer is over 2.0g/kg.
Mutagenicity --- The toner, which is included in this developer, has been tested on Ames test. The result is negative.

Carcinogenicity : In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors. While there have been no studies to date using developer, a two-year cancer bioassay using a typical toner preparation containing carbon black (a small amount of toner is included in the developer mixture) demonstrated no association between toner exposure and tumor development in rats.

Signs and Symptoms of Exposure : Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : Accumulation of dust in the respiratory system.

S H A R P

Data Revised : July 1, 1996
Date Issued : July 20, 1995

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-3361-1

Section 5. Health Hazard Data (Continued)

Emergency and First Aid Procedures :

Inhalation ; Remove to fresh air. If effects occur, consult medical personnel.
Eye ; In case of contact, immediately flush eyes with water for 15 minutes.

Section 6. Physical Chemical Characteristics

Boiling / Melting Point	:	Not applicable	**Specific Gravity**	:	about 5
Vapor Pressure	:	Not applicable	**Solubility in Water**	:	Negligible
Vapor Density	:	Not applicable	**PH**	:	Not applicable
Evaporation Rate	:	Not applicable	**Viscosity**	:	Not applicable
Appearance	:	Fine powder	**Color**	:	Black
Odor	:	Odorless			

Section 7. Fire and Explosion Data

Flash Point (Method Used)	:	Not applicable
Ignition Temperature	:	> 350 degree
Flammable Limits	:	(LEL); Not applicable (UEL); Not applicable
Extinguishing Media	:	CO_2, dry chemical, foam or water
Special Fire Fighting Procedure	:	None.
Unusual Fire and Explosion Hazard	:	This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	:	None
Sensitivity to Static Charge	:	None

Section 8. Reactivity Data

Stability	:	Stable
Incompatibility (Material to Avoid)	:	None
Hazardous Decomposition	:	CO and NOx
Hazardous Polymerization	:	Will not occur.

Section 9. Precautions for Safe Handling and Use

Personal Protection Information (Respiratory, Eye Protection and Protective Glove):
None required under normal use.

Engineering Control / Ventilation	:	Not required.
Work / Hygienic Practice	:	Not required.
Steps to be taken in case of Spill or Leak	:	Sweep up or clean up with vacuum cleaner.
Waste Disposal Method	:	Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

Section 10. Regulatory Information

NFPA Rating (U.S.A.)	:	Health = 1 Flammability = 1 Reactivity = 0
WHMIS Legislation (Canada)	:	This product is not a controlled product.
Transport Information	:	This product is not a hazardous material.
UN No.	:	None allocated.

Section 11. Other Information

References : IARC (1996) IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 65, Printing Process and Printing inks, Carbon Black and Some Nitro Compounds, Lyon, pp-149-261 H. Muhle, B. Bellmann, O. Creutzenberg, C. Dasenbrock, H. Ernst, R. Kilpper, J. C. MacKenzie, P. Morrow, U. Mohr, S. Takenaka, and R. Mermelstein (1991) Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats. Fundamental and Applied Toxicology 17, pp. 280-299

S H A R P

Data Revised : July 8, 1999
Date Issued : July 20, 1995

MATERIAL SAFETY DATA SHEET (1/2)

MSDS No. F-0361-1

Section 1. Product Identification

Product :
SF-222NT1/ ST1/ T1 (Black Toner) For use with : SF-2022, SF-2027

Section 2. Supplier's Name and Address

Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan
Local suppliers are listed below. Please contact the nearest supplier for additional information.

(Country)	(Name and Telephone Number)
U.S.A.	Sharp Electronics Corporation Telephone number for information : 1-800-237-4277 Emergency telephone number : 1-800-255-3924
Canada	Sharp Electronics of Canada Ltd. Telephone number for information : 905-890-2100 Emergency telephone number : 1-800-255-3924
United Kingdom	Sharp Electronics (U.K.) Ltd. Telephone number for information : 01923 474013

Section 3. Ingredients

Ingredients	CAS No.	Proportion	OSHA PEL	ACGIH TLV	Other Limits
Polystyrene	9003-53-6	>60%	Not listed	Not listed	None
Styrene-acrylate copolymer	29497-14-1	<30%	Not listed	Not listed	None
Carbon black	1333-86-4	< 6%	3.5mg/m^3	3.5mg/m^3	None
Organic Ammonium Salt	102561-46-6	< 2%	Not listed	Not listed	None
Polypropylene	9003-09-0	< 2%	Not listed	Not listed	None

Section 4. Hazardous Identification (Emergency Overview)

Toner is a fine, black powder possessing no immediate hazard. There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner. When used as intended according to instructions, studies do not indicate any symptoms of fibrosis will occur.

Section 5. Health Hazard Data

Route(s) of Entry :

Inhalation?	Skin?	Ingestion?
Yes	No	Possible but very unusual.

Health Hazards : Acute and Chronic --- LD_{50} of this toner is over 2,000mg/kg.
Mutagenicity --- The result of Ames test is negative.

Carcinogenicity : In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation containing carbon black demonstrated no association between toner exposure and tumor development in rats.

Chronic Effect : In a study in rats of chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of the rats in the high concentration (16mg/m^3) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/m^3) exposure group, but no pulmonary change was reported in the lowest (1mg/m^3) exposure group, the most relevant level to potential human exposures.

Signs and Symptoms of Exposure : Minimal irritation to respiratory tract may occur as with exposure to any non-toxic dust.

Medical Conditions Generally Aggravated by Exposure : Accumulation of dust in the respiratory system.

S H A R P

Data Revised : July 8, 1999
Date Issued : July 20, 1995

MATERIAL SAFETY DATA SHEET (2/2)

MSDS No. F-0361-1

Section 5. Health Hazard Data (Continued)

Emergency and First Aid Procedures :

Inhalation ; Remove to fresh air if effects occur, consult local medical personnel.
Eye ; In case of contact, immediately flush eyes with water for 5 minutes.

Section 6. Physical Chemical Characteristics

Boiling / Melting Point	:	Not applicable	**Specific Gravity**	:	1.1
Vapor Pressure	:	Not applicable	**Solubility in Water**	:	Negligible
Vapor Density	:	Not applicable	**PH**	:	Not applicable
Evaporation Rate	:	Not applicable	**Viscosity**	:	Not applicable
Appearance	:	Fine powder	**Color**	:	Black
Odor	:	Odorless			

Section 7. Fire and Explosion Data

Flash Point (Method Used)	:	Not applicable
Ignition Temperature	:	> 350 degree
Flammable Limits	:	(LEL); Not applicable (UEL); Not applicable
Extinguishing Media	:	CO_2, dry chemical, foam or water
Special Fire Fighting Procedure	:	This material will burn in the case of fire.
Unusual Fire and Explosion Hazard	:	This material has no unusual fire or explosion hazards.
Sensitivity to Mechanical Impact	:	None
Sensitivity to Static Charge	:	None

Section 8. Reactivity Data

Stability	:	Stable
Incompatibility (Material to Avoid)	:	None
Hazardous Decomposition	:	CO, CO_2 and NOx
Hazardous Polymerization	:	Will not occur.

Section 9. Precautions for Safe Handling and Use

Personal Protection Information (Respiratory, Eye Protection and Protective Glove):
Use of a dust mask is recommended when handling a large quantity of toner or during long Term exposure, as with any non-toxic dust.

Engineering Control / Ventilation	:	Not required.
Work / Hygienic Practice	:	Inhalation should be minimized as with any non-toxic dust.
Steps to be taken in case of Spill or Leak	:	Sweep up or clean up with vacuum cleaner.
Waste Disposal Method	:	Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

Section 10. Regulatory Information

NFPA Rating (U.S.A.)	:	Health = 0 Flammability = 1 Reactivity = 0
WHMIS Legislation (Canada)	:	This product is not a controlled product.
Transport Information	:	This product is not a hazardous material.
UN No.	:	None allocated.

Section 11. Other Information

References : IARC (1996) IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 65, Printing Process and Printing inks, Carbon Black and Some Nitro Compounds, Lyon, pp-149-261
H. Muhle, B. Bellmann, O. Creutzenberg, C. Dasenbrock, H. Ernst, R. Kilpper, J. C. MacKenzie, P. Morrow, U. Mohr, S. Takenaka, and R. Mermelstein (1991) Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats. Fundamental and Applied Toxicology 17, pp. 280-299

ENVIRONMENTAL DATA SHEET

Model: SF2022

Ozone Emission:

Average		Maximum	
ppm	mg/m^3	ppm	mg/m^3
0.04	0.0858	0.056	0.1201

Conversion Factor: 1ppm = 2.145mg/m^3
HSE short term exposure limit (15 minutes) = 0.2ppm (0.429mg/m^3)

Acoustic Noise: ('A' weighted sound power level)

Stand-by (dBA)	Copying (dBA)
<32	57

HSE maximum allowed noise level in the workplace without ear protection = 85dBA

Power Consumption:

Stand-by (W)	Copying (W)
850 (50 HLoff)	1350

Heat Output:

Stand-by (BTU)	Copying (BTU)
566	696

Dust Emission Level:

mg/m^3
0.092

SHARP SERVICE MANUAL

CODE: 00ZSF2022FM/E

No.1

SF-2022
SF-2027
SF-D20
SF-D21
MODEL SF-DM11

CONTENTS

[1] PRODUCT OUTLINE 1-1

[2] PRODUCT SPECIFICATIONS 2-1

[3] OPTIONS SPECIFICATIONS 3-1

[4] COMPONENT IDENTIFICATION 4-1

[5] INSTALLATION 5-1

[6] DISASSEMBLY AND REASSEMBLY 6-1

[7] ADJUSTMENTS 7-1

[8] TEST COMMANDS AND DIAGNOSTICS 8-1

[9] MAINTENANCE AND MISCELLANEOUS 9-1

Parts marked with "! " is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

CONTENTS

[1] PRODUCT OUTLINE 1-1

1. The SF-2022 and SF-2027 are medium class copiers that produce 20 to 30 copies per minute. The SF-2022 and SF-2027 have all the standard features of medium class copiers as well as having system expansion capability similar to high end copiers. 1-1
2. Target users 1-1
3. Features 1-1
   - (1) Compact body 1-1
   - (2) Clean copy production without contaminating environments 1-1
   - (3) High copy performance 1-1
   - (4) Adoption of modular structure 1-1
   - (5) Service, maintenance, and installation enhancement 1-1
4. System outline (options) 1-1

[2] PRODUCT SPECIFICATIONS 2-1

1. Basic specification 2-1
   - (1) Type 2-1
   - (2) Copy method 2-1
   - (3) Kinds of originals 2-1
   - (4) Copy speed 2-1
   - (6) Warmup time 2-1
   - (7) Multicopy 2-1
   - (8) Magnification ratio 2-2
   - (9) Exposure 2-2
   - (10) Paper feed 2-2
   - (11) Developing method 2-3
   - (12) Charge method 2-3
   - (13) Transfer method 2-3
   - (14) Separation method 2-3
   - (15) Fusing method 2-3
   - (16) Cleaning method 2-3
   - (17) Light source 2-3
   - (18) Blanking areas 2-3
   - (19) Automatic duplex 2-4
   - (20) Paper eject and finishing 2-4
   - (21) Additional features 2-4
   - (21) Power supply 2-4
   - (22) Power consumption 2-4
   - (23) Appearance 2-4
   - (24) Accessories 2-4
2. Consumables 2-5
   - SF-2022/2027 consumables and option units list (SEC) 2-5
   - SF-2022/2027 Supply Options (SECL) 2-6
   - SF-2022/2027 Supply Options (SEEG, SUK) 2-7
   - SF-2022.2027 Supply Options (SCA, SCNZ, Middle East, Africa) 2-8
   - SF-2022/2027 Supply Options (Asia, Middle/South America) 2-9
3. Environmental requirements 2-10

[3] OPTIONS SPECIFICATIONS 3-1
1. SF-A14 3-1
2. SF-A54 3-1
3. SF-S14 3-1
4. SF-S15 3-1
5. SF-S52 3-2
6. SF-D20 3-2
7. SF-D21 3-2

[4] COMPONENT IDENTIFICATION 4-1
1. External view 4-1
2. Operation panel 4-3
3. Internal view 4-5
4. Clutches, solenoids 4-6
5. SF-2022/2027 sensors 4-7
6. Motors 4-8
7. Board list 4-9
8. Duplex copy tray 4-10
9. Desk unit (SF-D20) 4-11
10. Desk unit (SF-D21) 4-12

[5] INSTALLATION 5-1
1. Installing conditions 5-1
   (1) Machine environment 5-1
   (2) Space around the copier 5-1
   (3) Machine table 5-1
   (4) Power source 5-1
   (5) Ground connection 5-1
2. Installation space 5-2
3. Installation procedure 5-3
   (1) SF-2022/SF-2027 5-3
      1. Releasing optical locks
         A Removing the #2/3 mirror unit lock 5-3
         B Releasing the lens and #4/5 mirror unit from lock 5-3
      2. Fuser unit set up 5-3
         A Removing the fuser unit 5-3
         B Tensioning the heat roller 5-3
         C Installing the cleaning roller 5-4
      3. Cleaning corona unit 5-5
         A Clean the main corona unit 5-5
         B Clean the transfer/separation corona wires 5-5
      4. Installing accessories 5-6
         A Install the copy receive tray 5-6
      5. Setting up the upper paper cassette 5-6
         A Remove the packing screw of the cassette. 5-6
         B Removing the cassette 5-6
         C Change the size using the side plates F and R. 5-6
         D Insert the rear plate 5-7
         E Set the size detect spacer 5-7

F Change the paper size indication plate 5-7
G Set the cassette 5-7
H Load paper 5-7
6. Set up the lower paper cassette 5-8
A Remove the packing screw of the cassette. 5-8
B Change the size using the side plates F and R.
(It had been set to the A3 position when the machine left the factory.) 5-8
C Change the size of the rear plate. 5-8
D Set the size detect spacer 5-8
E Change the paper size indication plate 5-8
F Load paper 5-8
7. Setting developing unit 5-9
A Remove the developing unit 5-9
B Load developer 5-9
C Set the developing unit to the copier 5-9
8. Adjust the toner density referance level 5-10
A Adjust the toner density referance level of the developing tank 5-10
9. Loading toner 5-10
A Loading toner 5-10
10. Attaching zoom select label 5-11
A Bond the label 5-11
(2) SF-IC11 5-12
Before performing the following procedure, be sure to remove the power plug of the
copier main unit. 5-12
1 To remove the stopper for the packaging cassette unit. 5-12
2 To change the size setting of side plate F and side plate R. 5-12
3 To change the size position of the rear end plate. 5-13
4 To set the size detection spacer. 5-13
5 To stick the cassette size labels. 5-13
6 To change the paper size indication plate. 5-13
7 To install the cassette main unit on the paper tray. 5-13
8 To set paper on the cassette. 5-14
(3) SF-CM11 5-15
Be sure to unplug the copier and install the unit as follows: 5-15
1 Remove the rear cabinet panel from the desk. 5-15
2 Install the lift-up unit. 5-15
3 Remount the rear cabinet panel onto the desk. 5-16
4 Remove the right cabinet panel from the desk. 5-16
5 Remove the cover. 5-16
6 Install the paper feed unit. 5-16
7 Remove the packing screw from the paper cassette. 5-16
8 Change the positions of the front and rear side plates. 5-17
9 Position the rear edge plate. 5-17
10 Set the paper size detection spacer. 5-17
11 Change the paper size indicator. 5-17
12 Fit the paper cassette guides into the guide rails. 5-18
13 Mount the right stopper. 5-18
14 Install the paper cassette. 5-18
15 Place the paper. 5-18
16 Remount the right cabinet panel onto the desk. 5-18

17 Adjust any center misalignment. 5-19
(4) SF-DM11 5-20
Before performing the following procedure, be sure to remove the power plug of the copier main unit. 5-20
1 To remove the rear cabinet of the copier main unit. 5-20
2 To install the ADU drive unit. 5-20
3 To install the rear cabinet of the copier main unit. 5-20
4 To remove the toner collecting container. 5-21
5 To remove the cover plate. 5-21
6 To install the ADU unit. 5-21
7 To install the right stopper. 5-21
8 To install the toner collecting container. 5-21
9 To check and adjust the matching guide. 5-22
10 To adjust the center dislocation. 5-22
(5) SF-A54 5-23
Unplug the copier and follow the procedure below. 5-23
1 Remove the document cover. 5-23
2 Mount the ADF onto the copier. 5-23
3 Adjust the angle of ADF. 5-24
4 Remove the rear cabinet panel from the copier and cut out the notch in the cabinet panel. 5-24
5 Connect the ADF connectors. 5-24
6 Reattach the rear cabinet panel. 5-24
7 Connect the ADF tray connector. 5-24
8 Affach the tray. 5-24
9 Set the mode. 5-25
10 Adjust the center of the copy. 5-25
(6) SF-S15 (20-Bin Sorter) 5-26
Unplug the copier and follow the procedure below. 5-26
1 Install the support guide. 5-26
2 Mount the sorter seat to the desk. 5-26
3 Remove the front panel of the sorter. 5-26
4 Place the sorter on the sorter seat. 5-27
5 Remove the rear cabinet panel from the copier and cut out the notch in the cabinet panel. 5-27
6 Connect the sorter connectors. 5-27
7 Reattach the rear cabinet panel. 5-27
8 Reattach the front panel of the sorter. 5-27
9 Adjust the clearance between the sorter and the copier. 5-28
10 Attach the label. 5-28
11 Set the mode. 5-28
(7) SF-D20/SF-D21 5-29
Before installation, remove all of the screws, tape, and shipping material as shown below. 5-29
Be sure to unplug the copier before carrying out the following procedures. 5-30
1 Place the copier on the desk. 5-30
2 Secure the copier to the desk. 5-30
3 Remove the rear cabinet panel from the copier. 5-30
4 Connect the desk relay harness. 5-30
5 Remount the rear cabinet panel onto the copier. 5-30
6 Move the copier to the desired installation location. 5-31
7 Lock the casters. 5-31
8 Lower the adjuster to secure the desk in place. 5-31

9 Pull out the paper cassette. 5-31
10 Adjust the positions of the front and rear side plates. 5-31
11 Adjust the position of the rear edge plate. 5-31
12 Set the paper size detection spacer. 5-32
13 Change the paper size indicator. 5-32
14 Re-insert the paper cassette. 5-32
15 Place the paper in the cassette. 5-32
16 Set the mode. 5-33
17 Pull out the large-capacity paper cassette. 5-33
18 Adjust the positions of the front and rear paper guides. 5-33
19 Adjust the position of the rear edge paper guide. 5-33
20 Set the paper size detection spacer. 5-34
21 Change the paper size indicator. 5-34
22 Re-insert the large-capacity paper cassette. 5-34
23 Place the paper in the cassette. 5-34
24 Set the mode. 5-35

[6] DISASSEMBLY AND REASSEMBLY 6-2
1. Process unit 6-1
2. Manual feed multicopy unit 6-3
3. Paper feed unit 6-5
4. Transport baseplate unit 6-7
5. Fuser unit 6-9
6. Duplex copy unit 6-11
7. Rear frame side major components 6-13
8. Operation panel unit and document size sensor board (light receive side) 6-16
9. Optical unit 6-17

[7] ADJUSTMENT 7-1
1. Developing Unit 7-1
   (1) Clearance Adjustment of Developing Doctor Blade 7-1
   (2) Position Adjustment of Developing Magnet Roller Main Pole 7-1
   (3) Developing Bias Adjustment 7-2
   (4) Notes on installing various rollers of the developing unit 7-2
   (5) Notes on applying the developing side seals (front and rear) 7-2
2. Processing Unit 7-3
   (1) Adjustment of Blank Lamp Position 7-3
   (2) Adjustment of Solid Width of Both Ends 7-3
   (3) Adjustment of High-Voltage Output Balance 7-3
      A. Applying the Special Measuring Tool 7-3
      B. Adjusting the Transfer Charger Current 7-4
      C. Checking the Electrostatic Main Charger Current 7-5
      D. Adjusting the Electrostatic Main Charger Grid Voltage 7-5
      E. Adjusting the Separation Charger Output 7-6
   (4) Notes on maintenance for high-voltage units 7-6
      A. Electrostatic Charger Unit 7-6
      B. Transfer/Separation Charger Unit 7-6
3. Adjustment of Optical System 7-7
   (1) Adjusting the Reference Position of Lens 7-8

(2) Adjusting the Reference Position of 4. and 5. Mirror 7-8
(3) Adjusting the Longitudinal Magnification 7-8
(4) Adjusting the Resolution 7-9
(5) Adjusting the Lateral Magnification 7-10
(6) Inputting the Lens Travel Correction Value 7-10
(7) Correcting the Longitudinal Distortion 7-12
(8) Correcting the Lateral Distortion 7-13
(9) Adjusting the Center Deviation 7-14
(10) Adjusting the Exposure Balance 7-14
(11) Adjusting the Copy 7-15

4. Adjustment of Original Detecting Mechanism 7-17
(1) Adjusting the Original Detecting Arm Unit 7-17
(2) Adjusting the Original Detection Level 7-18

5. Adjustment of Copy Density 7-19
1. When must the copy density be adjusted ? 7-19
2. Notes on adjustment of copy density 7-19
3. Procedure for copy density adjustment 7-19
(1) Initial setting of auto-exposure density level (User adjustment) 7-19
(2) Initial setting of TSM mode (User adjustment) 7-19
(3) Adjustment of AE sensor level 7-19
(4) Setting of drum sensitivity 7-20
(5) Setting of test chart 7-20
(6) Adjustment of copy density 7-20

[8] Test commands and diagnostics 8-1

1. Test command 8-1
(1) Introduction 8-1
(2) Purpose 8-1
(3) Test command execution procedure 8-1

[9] Maintenance and Miscellaneous 9-1

1. Maintenance Schedule 9-1

2. Counters and Simulations Related to Maintenance 9-2
(1) List of counters and simulations related to maintenance 9-2
(2) Maintenance Indication 9-3
(3) Setting the copy counter mode 9-3

3. Replacing the Ozone Filter 9-3
(1) Replacing the suction ozone filter 9-3

4. Oil/Grease Points 9-3
(1) Gear of main driving unit 9-3
(2) Gear of variable-speed paper-feed unit 9-3
(3) Gear of paper-feed driving unit 9-4
(4) Fusing unit driving gear 9-4
(5) Paper exit roller driving gear 9-4
(6) Paper-feed torque limiter 500-sheet cassette brake spring 9-4
(7) Optical rail 9-4

5. Maintenance Schedule of Options 9-4

[1] PRODUCT OUTLINE

1. The SF-2022 and SF-2027 are medium class copiers that produce 20 to 30 copies per minute. The SF-2022 and SF-2027 have all the standard features of medium class copiers as well as having system expansion capability similar to high end copiers.

2. Target users

Average copy volume: 3,000 to 8,000 copies/month
Usage: 1,000 to 10,000 copies/month

3. Features

(1) Compact body

1 Small body size
The width of the body is 600mm that is the smallest in this class.

2 Use of a front loading paper cassette and the folding multiple manual paper feed table eliminate the protrusion on the right side of the machine.

3 Use of a space reduced RADF and the front loading drawers save space even after upgrades.

(2) Clean copy production without contaminating environments

1 Consideration was given during design in order to avoid contamination against ozone and dust. Considerations were also made for recycle paper, packaging, and recycling of machine elements after the use.

2 Low level of machine noise.

(3) High copy performance

1 The fastest first copy time in this class.

2 High job efficiency.

(4) Adoption of modular structure

1 Offers a variety of paper feed systems by the use of a modular desk

2 module slots
Up to two units of 500-sheet cassette modules can be installed at the same time.

LCC desk unit
Besides, a 1000-sheet LCC, a 500-sheet cassette module can be added in the LCC desk.

2 Upper cassette module that allows the machine specification to be chosen according to the usage.

Cassette modules.
500-sheet cassette module.
Automatic Duplex Unit (ADU) in the modular design.

(5) Service, maintenance, and installation enhancement

1 Upgraded paper feed performance

2 Adoption of the paper feed roller

3 Easy installation and reduced maintenance time

4 Internal power supply for option units

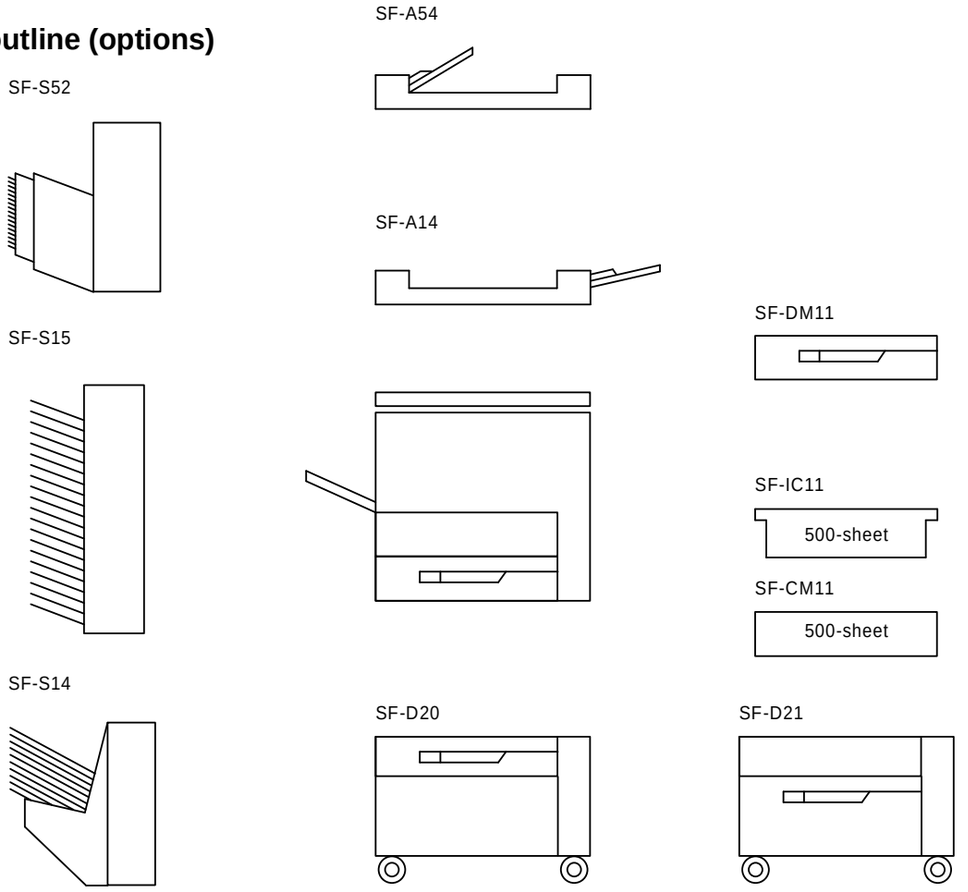
5 Easier replacement of consumable

6 Adoption of the paper feed drawer system

7 Provision of the communication feature

8 Universal power supply for 50/60Hz source frequency

4. System outline (options)



[2] PRODUCT SPECIFICATIONS

1. Basic specification

(1) Type

Desktop

(2) Copy method

Dry static copier

(3) Kinds of originals

Sheet, book, three dimensional object		
Thickness of original:		Maximum 30mm in level with the original cover in use.
Weight of original:		Maximum 1.8 kg
Maximum original size:		A3, 11" x 17"
Original alignment:		Center and left
Use of an original sensor:		
SF-2027	AB series;	A3, B4, A4, A4R, A5
	Inch series:	11" x 17", 8½" x 14", 8½" x 11", 8½" x 11" (R), 8½" x 5½"

Option:	RADF, ADF
Original loading capacity:	50 sheets
Original size:	A3 to A5, 11" x 17" to 8½" x 5½"
Original replace speed:	22 sheets per minute (27 sheets per minute for SF-2027)
Weight of original:	50 to 128 g/m^2
Random or mixed paper feed mode:	Possible

(4) Copy speed

	Actual (1:1)	Enlage (ratio)	Reduce (ratio)
A3	12/15 sheets per minute	9/10 sheets per minute (200%)	10/12 sheets per minute (50%)
B4	14/17 sheets per minute	9/10 sheets per minute (200%)	11/14 sheets per minute (50%)
A4 (portrait)	22/27 sheets per minute	11/13 sheets per minute (200%)	18/21 sheets per minute (50%)
A4 (landscape)	17/21 sheets per minute	10/11 sheets per minute (200%)	14/17 sheets per minute (50%)
B5 (portrait)	22/27 sheets per minute	11/13 sheets per minute (200%)	18/21 sheets per minute (50%)
B5 (landscape)	17/21 sheets per minute	10/11 sheets per minute (200%)	14/17 sheets per minute (50%)
Double letter	12/15 sheets per minute	9/10 sheets per minute (200%)	10/12 sheets per minute (50%)
Legal	14/17 sheets per minute	9/10 sheets per minute (200%)	11/14 sheets per minute (50%)
Letter (portrait)	22/27 sheets per minute	11/13 sheets per minute (200%)	18/21 sheets per minute (50%)
Letter (landscape)	17/21 sheets per minute	10/11 sheets per minute (200%)	14/17 sheets per minute (50%)

NOTE: Copy speeds indicated in Enlargement and Reduction modes are the slowest speeds in the respective mode.

(6) Warmup time

About 90 seconds
(Without pre-heat feature)
Misfeed recovery time: 8 seconds, provided that it is in the standard condition in 60 seconds after leaving the door open.

(7) Multicopy

Maximum multicopy number: 99 sheets

(8) Magnification ratio

Fixed ratio	AB series: 4R+4E; 200, 141, 122, 115, 100, 86, 81, 70, 50%
	Inch series: 4R+4E; 200, 141, 129, 121, 100, 95, 77, 64, 50%
Zooming range:	50 to 200% (1% increments)

(9) Exposure

Exposure mode: Auto, manual, photo
Exposure system: Slit exposure and moving optical system (fixed original table)

(10) Paper feed

Copy size (maximum ~ minimum)	AB series: A3 to A6R
	Inch series: 11" x 17" to 8½" x 5½"
Method	One cassette + multi-manual feed
Capacity	500 + 50 sheets

AB series

Paper entry	Paper size	Paper weight	Size selection	Side, front
Upper cassette	B5/B5R A4/A4R/B4/A3	56 ~ 80g/m^2 15 ~ 21 lbs.	Selection by way of guide replacement or by the service engineer	Front, drawer in the same body ADU compatibility available
Lower cassette	A5/B5/B5R A4/A4R/B4 A3: * With the option inner cassette used	56 ~ 80g/m^2 15 ~ 21 lbs.	Selection by way of guide replacement or by the service engineer	By way of front, inner cassette

Inch series

Paper entry	Paper feed size	Paper weight	Size selection	Side, front
Upper cassette	8½ x 11", 8½" x 11" (R), 8½" x 14", 11" x 17"	56 ~ 80g/m^2 15 ~ 21 lbs.	Selection by way of guide replacement or by the service engineer	Front, drawer in the same body ADU compatibility available
Lower cassette	8½ x 11", 8½" x 11" (R), 8½" x 14", 11" x 17", 8½" x 5½" * With the option inner cassette used	56 ~ 80g/m^2 15 ~ 21 lbs.	Selection by way of guide replacement or by the service engineer	By way of front, inner cassette

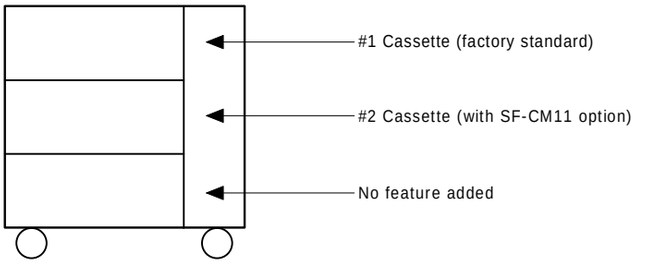
Manual feed

Paper size:	AB series: Inch series:	A3 to A6R 11" x 17" to 8½" x 5½"
Paper weight:	Multifeed mode: Single feed mode:	56 to 80 g/m^2 (15 to 21 lbs) 52 to 128 g/m^2 (14 to 34 lbs) (A4 size or under, if above 105 g/m^2) (or 28 lbs)
Kind of paper:		Standard, Sharp designated paper, OHP

1. Single paper feed desk

<<Model name: SF-D20>>

(Outlook)



Number of paper feed sources: Single (two sources if expanded)

Paper feed capacity:	500 sheets
Expanded:	1000 sheets 500-sheet cassette x 2 sources (with SF-CM11 in use). * 500 sheets of 80 g/m^2 must be in each cassette.

Paper size:	AB series:	A3, B4, A4, A4R, B5, B5R
	Inch series:	11" x 17", 8½" x 14", 8½ x 11", 8½ x 11" (R)

Paper weight:	50 to 80 g/m^2 (15 to 21 pounds)

Size selection:	Selection by way of guide replacement or by the service engineer

Power supply:	From the copier

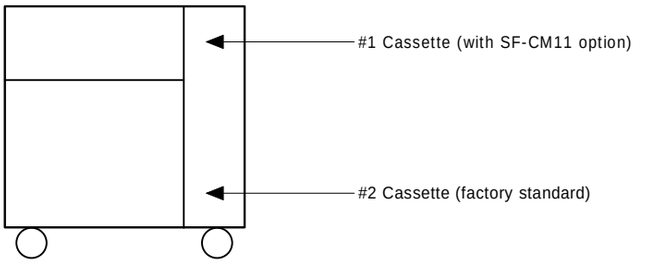
Physical dimentions (mm):	600(W) x 625(D) x 451(H)

Weight:	27.2Kg (59.8 lbs).

8. Large capacity paper feed desk

<<Model name: SF-D21>>

(Outlook)



Number of paper feed sources:	Single (two sources if expanded)

Paper feed capacity:	1000 sheets
Expanded:	1500 sheets 1000-sheet cassette + 500-sheet cassette sources (with SF-CM11 in use). * Given number of sheets of 80 g/m^2 must be in each cassette.

<<1000-sheet drawer (#2 cassette)>>

Paper size:	AB series:	B4, A4, A4R, B5, B5R
	Inch series:	8½" x 14", 8½ x 11", 8½ x 11" (R)

<<#1 cassette option>>

Paper size:	AB series:	A3, B4, A4, A4R, B5, B5R
	Inch series:	11" x 17", 8½" x 14", 8½ x 11", 8½ x 11" (R)

Paper weight:	50 to 80 g/m^2 (15 to 21 punds)

Size selection:	Selection by the service engineer

Power supply:	From the copier

Physical dimentions (mm):	600(W) x 625(D) x 451(H)

Weight:	33.2Kg.	(73.0 lbs)

(11) Developing method

Dry, two components magnetic brush method

(12) Charge method

(–) DC saw-teeth electrode method

(13) Transfer method

(–) DC Corotron method

(14) Separation method

AC Corotron method

(15) Fusing method

Heat roller method

(16) Cleaning method

Blade method

(17) Light source

Halogen lamp

(18) Blanking areas

Void area:	3mm from the lead edge
Image loss:	3mm at maximum during the actual (1:1) copy mode

(19) Automatic duplex

Option (module)		
Location	Copier upper module slot	
Size	AB series:	A3, B4, A4, A4R, B5, B5R, A5
	Inch series:	11" X 17", 8½" x 14", 8½ x 11", 8½ x 11" (R)
Capacity		50 sheets (below A4 or letter sizes) or 30 sheets (above B4 or 8½" x 14" size)
Paper weight		56 to 80 g/m^2 (15 to 21 lbs)

(20) Paper eject and finishing

Capacity of paper receive tray	250 sheets		
Finishing (with option in use)			
Finisher function	Sorted bin capacity	Non-sorted bin capacity	
20-bin sorter	50 sheets	100 sheets	Fixed bins
10-bin sorter	50 sheets (A4 size or Less)	100 sheets	Movable bins
20-bin stapler sorter	35 sheets (25 sheets, if stapler used) (A4 or Less)	100 sheets	Movable bins

(21) Additional features

	Availability of feature	
APS	No/Yes	Yes if the ADF used
AMS	Yes	
Margin shift	Yes	10mm shift (S → S)
DPCM	Yes	Enlarge not permitted
Edge erase	Yes	7 to 12mm wide
Monochrome	Yes	(Red, blue)

APS: Auto paper selection
AMS: Auto magnification ratio selection
DPCM: Dual page copy mode

Supplement

Binding margin

Width	AB series	Inch series
Single sides to single sided	10mm	1/4"
Double sided to single sided	5mm	1/4"
Single sided to double sided (front)	0	0
(reverse)	5mm	1/4"
Double sided to double sided (front)	10mm	1/4"
(revrse)	10mm	1/4"

DPCM
Enlarge not possible

Frame delete

AB series		Inch series	
Size	Deleted width (mm)	Size	Deleted width (mm)
A3	11.5±3	11" x 17"	11.5±3
B4	9.5±3	8½" x 14"	7 ±3
A4	11.5±3	8½" x 11"	11.5±3
A4R	10 ±3	8½" x 11" (R)	7 ±3
B5	9.5±3	8½" x 5½"	7 ±3
B5R	8 ±3		

(21) Power supply

Voltage: 100V, 50/60Hz; 110V, 50/60Hz; 120V, 60Hz; 127V, 60Hz; 220V, 50/60Hz; 240V, 50Hz
Frequency: 50/60Hz, universal

(22) Power consumption

Maximum power consumption: 1.35KW, maximum, with options used
Standby power consumption: 0.05KW with the heater lamp inactive; 0.85KW with the heater lamp active.

(23) Appearance

WxDxH (mm) 600 x 650 x 567 (at the top of the table glass)
600x 650 x 607 (at the top of the original cover)
Occupied area (W x D in mm) 1172 x 650 (with the paper receive tray and manual feed bypass open
Weight: Main body About 66Kg (145lbs)
Paper feed module: 4.8Kg (10.6 lbs)
Original cover: 1.5Kg (3.3 lbs)

(24) Accessories

Original cover, paper receive tray, waste toner collect containers (x 4) with one container installed at the factory, instruction manual, dust cover, quick magnification ratio reference chart, key sheet

Other printed material
Installation report (SEEG), SCA warranty card, warranty registration card (SUK)

Different accessories and standard equipment may vary depending on the product destination.

2. Consumables

SF-2022/2027 consumables and option units list (SEC)

No.	Name	Contents of items	Life	Product name	Contents per pack	Size (W X D X H)(mm), weight (Kg)	Note
1	Drum	OPC drum X1	80K	SF-222DR	1	442 X 188 X 421/4.9	
2	Developer, black	Developer (850g) X 10	80K (X10)	SF-222MD1	10	281 X 200 X 230/9.5	(SF-222ND1) X 10 = SF-222MD1
3	Toner, black	Toner cartridge (320g) X 10	8K (X10)	SF-222MT1	10	712 X 390 X 163/6.2	(SF-222NT1) X 10 = SF-222MT1
4	Color developer (red) (blue)	Developer (850g) X 10	10K (X10)	 SF-222MD2 SF-222MD3	10	438 X 183 X 180/9.6	(SF-222ND2) X 10 = SF-222MD2 (SF-222ND3) X 10 = SF-222MD3
5	Color toner (red) (blue)	Toner cartridge (250g) X 10	6K (X10)	 SF-222MT2 SF-222MT3	10	712 X 390 X 163/5.5	 (SF-222NT2) X 10 = SF-222MT2 (SF-222NT3) X 10 = SF-222MT3
6	Color developer kit (red) (blue)	Developer (850g) X 1 Toner cartrige (250g) X 1 Developing unit X 1 Storage case X 1		SF-222NK2 SF-222NK3	1	780 X 259 X 210/4.55	
7	Upper heat roller kit	Upper heat roller X 1 Fuser separation pawl, lower X 4	160K	SF-222UH	5	439 X 347 X 119/3.26	Service parts item must be used when replacing the fuser separation pawl (80K) at every 80,000 copies
8	Lower heat roller kit	Lower heat roller X 1 Fuser separation pawl, lower X 2	160K	SF-880LH	5	357 X 341 X 124/5.0	Service parts item must be used when replacing the fuser separation pawl (80K) at every 80,000 copies (Use shared with those of SF-8570 and SF-8870).
9	80K maintenance kit	Cleaner blade X 1 Upper cleaning roller X 1 Main corona charging plate unit X 1 Drum separation pawl unit X 1	80K	SF-222KA1	5	482 X 408 X 122/3.0	
10	Cleaner blade	Cleaner blade X 10	80K (X 10)	SF-222CB	10	416 X 197 X 208/2.7	
11	Upper cleaning roller	Upper cleaning roller X 10	80K (X 10)	SF-222CR	10	400 X 166 X 85/2.1	
12	Stapler cartridge	Staple cartridge (3pcs) X 10		SF-LS51	10	250 X 96 X 154/6.2	Use of the stapler shared with the SF-S51 stapler/sorter (SF-SC50) X 10 = SF-LS51

* Use the service parts for the waste toner container (4 bottles/80K), screen grid (80K), ozone filter (80K), toner receive seal (160K), and DV seal (160K). The main corona charging plate unit (80K) and the drum separation pawl unit (80K) are also available as service parts.

SF-2022/2027 Supply Options (SECL)

No.	Name	Content	Life	Model name	Packing	Dimensions (W X D X H)/Weight mm/kg	Remark
1	Drum	OPC drum X1	80K	SF-222DR	1	442 X 188 X 421/4.9	
2	Developer (Black)	Developer (850g) X10	80K (X10)	SF-222MD1	10	281 X 200 X 230/9.5	(SF-222ND1) X 10 = SF-222MD1
3	Toner (Black)	Toner cartridge (320g) X10	8K (X10)	SF-222MT1	10	712 X 390 X 163/6.2	(SF-222NT1) X 10 = SF-222MT1
4	Color developer (Red) (Blue)	Developer (850g) X10	10K (X10)	 SF-222MD2 SF-222MD3	10	438 X 183 X 180/9.6	 (SF-222ND2) X 10 = SF-222MD2 (SF-222ND3) X 10 = SF-222MD3
5	Color toner (Red) (Blue)	Toner cartridge (250g) X10	6K (X10)	 SF-222MT2 SF-222MT3	10	712 X 390 X 163/5.5	 (SF-222NT2) X 10 = SF-222MT2 (SF-222NT3) X 10 = SF-222MT3
6	Color developer kit (Red) (Blue)	Developer (850g) X1 Toner cartridge (250g) X1 Developing unit X1 Storage case X1		 SF-222NK2 SF-222NK3	1	780 X 259 X 210/4.55	
7	80K maintenance kit	Upper cleaning roller X1 Cleaner blade X1 Toner collection container X4 Fuser separation pawl (Upper) X4 Fuser separation pawl (Lower) X2 Screen grid X1 Charging plate unit X1 Drum separation pawl unit X1	80K	SF-222KA	1	478 X 243 X 112/1.5	
8	160K maintenance kit	Upper heat roller X1 Lower heat roller X1 Toner reception seal X1 DV seal X1 Heat roller gear X1	160K	SF-222KB	1	450 X 190 X 95/1.61	
9	Staple cartridge	Staple cartridge (3 pcs) X1		SF-SC51	10	250 X 96 X 154/6.2	Staple sorter (Common to the SF-S51)

SF-2022/2027 Supply Options (SEEG, SUK)

No.	Name	Content	Life	Model name	Packing	Dimensions (W X D X H)/Weight mm/kg	Remark
1	Drum	OPC drum X1	80K	SF-222DM	1	442 X 188 X 421/4.9	
2	Developer (Black)	Developer (850g) X10	80K (X10)	SF-222LD1	10	281 X 200 X 230/9.5	(SF-222DV1) X 10 = SF-222LD1
3	Toner (Black)	Toner cartridge (320g) X10	8K (X10)	SF-222LT1	10	712 X 390 X 163/6.2	(SF-222T1) X 10 = SF-222LT1
4	Color developer (Red) (Blue)	Developer (850g) X1	10K	 SF-222DV2 SF-222DV3	10	438 X 183 X 180/9.5	Ordering unit: 10 pcs
5	Color toner (Red) (Blue)	Toner cartridge (250g) X1	6K	 SF-222T2 SF-222T3	10	712 X 390 X 163/5.5	Ordering unit: 10 pcs
6	Color developer kit (Red) (Blue)	Developer (850g) X1 Toner cartridge (250g) X1 Developing unit X1 Storage case X1		 SF-222K2 SF-222K3	1	780 X 259 X 210/4.55	
7	80K maintenance kit	Upper cleaning roller X1 Cleaner blade X1 Toner collection container X4 Fuser separation pawl (Upper) X4 Fuser separation pawl (Lower) X2 Screen grid X1 Charging plate unit X1 Drum separation pawl unit X1	80K	SF-222KA	1	478 X 243 X 112/1.5	Make distinction with A3SF222KAL due to compliance with European code.
8	160K maintenance kit	Upper heat roller X1 Lower heat roller X1 Toner reception seal X1 DV seal X1 Heat roller gear X1	160K	SF-222KB	1	450 X 190 X 95/1.61	Make distinction with A3SF222KBL due to compliance with European code.
9	Staple cartridge	Staple cartridge (3 pcs) X1		SF-SC51	10	250 X 96 X 154/6.2	Staple sorter (Common to the SF-S51)

SF-2022.2027 Supply Options (SCA, SCNZ, Middle East, Africa)

No.	Name	Content	Life	Model name	Packing	Dimensions (W X D X H)/Weight mm/kg	Remark
1	Drum	OPC drum X1	80K	SF-222DM	1	442 X 188 X 421/4.9	
2	Developer (Black)	Developer (850g) X10	80K (X10)	SF-222LD1	10	281 X 200 X 230/9.5	(SF-222DV1) X 10 = SF-222LD1
3	Toner (Black)	Toner cartridge (320g) X10	8K (X10)	SF-222LT1	10	712 X 390 X 163/6.2	(SF-222T1) X 10 = SF-222LT1
4	Color developer (Red) (Blue)	Developer (850g) X10	10K (X10)	 SF-222LD2 SF-222LD3	10	438 X 183 X 180/9.6	 (SF-222DV2) X 10 = SF-222LD2 (SF-222DV3) X 10 = SF-222LD3
5	Color toner (Red) (Blue)	Toner cartridge (250g) X10	6K (X10)	 SF-222LT2 SF-222LT3	10	712 X 390 X 163/5.5	 (SF-222T2) X10 = SF-222LT2 (SF-222T3) X 10 = SF-222LT3
6	Color developer kit (Red) (Blue)	Developer (850g) X1 Toner cartridge (250g) X1 Developing unit X1 Storage case X1		 SF-222K2 SF-222K3	1	780 X 259 X 210/4.55	
7	80K maintenance kit	Upper cleaning roller X1 Cleaner blade X1 Toner collection container X4 Fuser separation pawl (Upper) X4 Fuser separation pawl (Lower) X2 Screen grid X1 Charging plate unit X1 Drum separation pawl unit X1	80K	SF-222KA	1	478 X 243 X 112/1.5	Make distinction with A3SF222KAL due to compliance with European code.
8	160K maintenance kit	Upper heat roller X1 Lower heat roller X1 Toner reception seal X1 DV seal X1 Heat roller gear X1	160K	SF-222KB	1	450 X 190 X 95/1.61	Make distinction with A3SF222KBL due to compliance with European code.
9	Staple cartridge	Staple cartridge (3 pcs) X1		SF-SC51	10	250 X 96 X 154/6.2	Staple sorter (Common to the SF-S51)

SF-2022/2027 Supply Options (Asia, Middle/South America)

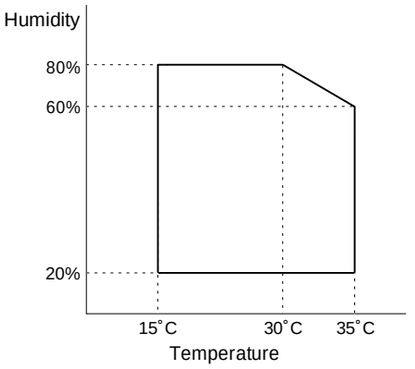
No.	Name	Content	Life	Model name	Packing	Dimensions (W X D X H)/Weight mm/kg	Remark
1	Drum	OPC drum X1	80K	SF-222DR	1	442 X 188 X 421/4.9	
2	Developer (Black)	Developer (850g) X10	80K (X10)	SF-222CD1	10	281 X 200 X 230/9.5	(SF-222SD1) X 10 = SF-222CD1
3	Toner (Black)	Toner cartridge (320g) X10	8K (X10)	SF-222CT1	10	712 X 390 X 163/6.2	(SF-222ST1) X 10 = SF-222CT1
4	Color developer	Developer (850g) X10	10K (X10)		10	438 X 183 X 180/9.6	
	(Red)			SF-222CD2			(SF-222SD2) X 10 = SF-222CD2
	(Blue)			SF-222CD3			(SF-222SD3) X 10 = SF-222CD3
5	Color toner	Toner cartridge (250g) X10	6K (X10)		10	712 X 390 X 163/5.5	
	(Red)			SF-222CT2			(SF-222ST2) X 10 = SF-222CT2
	(Blue)			SF-222CT3			(SF-222ST3) X 10 = SF-222CT3
6	Color developer kit	Developer (850g) X1			1	780 X 259 X 210/4.55	
	(Red)	Toner cartridge (250g) X1		SF-222SK2			
	(Blue)	Developing unit X1		SF-222SK3			
		Storage case X1					
7	80K maintenance kit	Upper cleaning roller X1	80K	SF-222KA	1	478 X 243 X 112/1.5	
		Cleaner blade X1					
		Toner collection container X4					
		Fuser separation pawl (Upper) X4					
		Fuser separation pawl (Lower) X2					
		Screen grid X1					
		Charging plate unit X1					
		Drum separation pawl unit X1					
8	160K maintenance kit	Upper heat roller X1	160K	SF-222KB	1	450 X 190 X 95/1.61	
		Lower heat roller X1					
		Toner reception seal X1					
		DV seal X1					
		Heat roller gear X1					
9	Staple cartridge	Staple cartridge (3 pcs) X1		SF-SC51	10	250 X 96 X 154/6.2	Staple sorter (Common to the SF-S51)

3. Environmental requirements

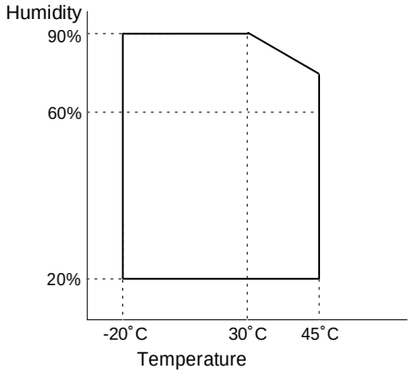
Conditions required for proper operation of the machine, as well as assurance of copy quality, the following are requested.

1 Standard conditions
Recommended temperature range at 20 to 25 Centigrade (68 to 77 degrees F) and humidity range at 65 ± 5%RH.

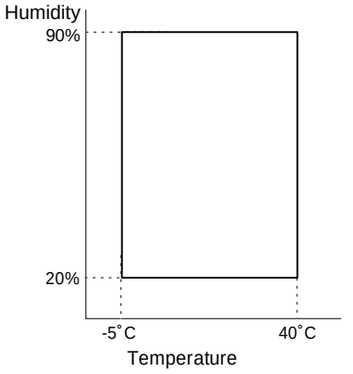
2 Operating conditions



3 Shipping conditions

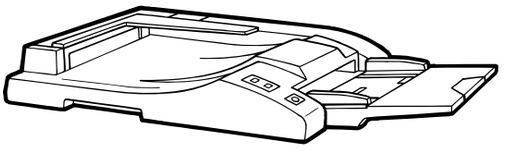


4 Consumables storage conditions



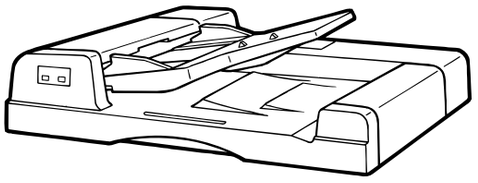
[3] OPTIONS SPECIFICATIONS

1. SF-A14



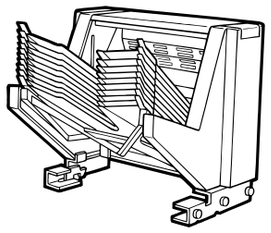
Acceptable originals	Weight:	14 to 34 lbs. 35 to 128 g/m^2.
	Size:	8½″ × 5½″ to 11″ × 17″. A5 to A3
	Number of sheets:	Up to 50 sheets 8½″ × 5½″, 8½″ × 11″, 8½″ × 14″, 11″ × 17″ A5, A4, B4, A3 Provided the total aggregate thickness does not exceed ¼″ (14 to 20 lbs.) or 3⁄16″ (21 lbs. to 34 lbs.) 6.5 mm (35 to 80 g/m^2) or 5 mm (81 to 128 g/m^2)
Power supply:	Drawn from the copier	

2. SF-A54



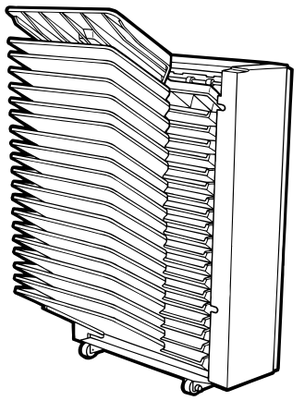
Acceptable originals	Weight:	(Single-sided original) 14 to 34 lbs. 35 to 128 g/m^2. (Two-sided original) 14 to 34 lbs. for 8½″ × 5½″ and 8½″ × 11″ 14 to 29 lbs. for 8½″ × 14″ and 11″ × 17″ 55 to 128 g/m^2.
	Size:	8½″ × 5½″ to 11″ × 17″. A5 to A3.
	Number of sheets:	Up to 50 sheets 8½″ × 5½″, 8½″ × 11″, 8½″ × 14″ A5, A4, B4 Provided the total aggregate thickness does not exceed ¼″ (14 to 20 lbs.) or 3⁄16″ (21 to 34 lbs.) 6.5 mm (35 to 80 g/m^2) or 5 mm (81 to 128 g/m^2) Up to 30 sheets 11″ × 17″, A3
Power supply:	Drawn from the copier	

3. SF-S14



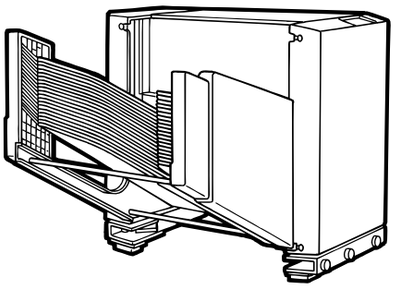
No. of bins	10	
Bin capacity	NON-SORT:	100 sheets (top bin)
	SORT:	50 sheets (8½″ × 11″) (A4) 40 sheets (8½″ × 14″) (B4) 30 sheets (11″ × 17″) (A3)
	GROUP:	35 sheets (8½″ × 11″) (A4) 25 sheets (8½″ × 14″) (B4) 20 sheets (11″ × 17″) (A3)
Paper size:	Top bin:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
	Sort bins:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
Power supply	Drawn from the copier.	

4. SF-S15



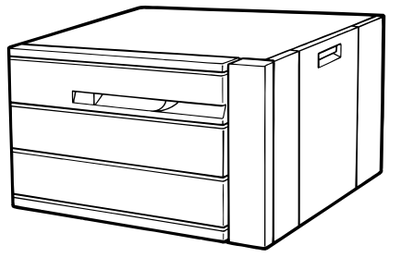
No. of bins	20	
Bin capacity	NON-SORT:	100 sheets (top bin)
	SORT:	50 sheets
	GROUP:	30 sheets
Paper size:	Top bin:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
	Sort bin:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
Power supply	Drawn from the copier.	

5. SF-S52



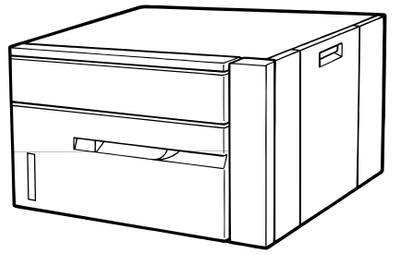
No. of bins	20	
Bin capacity	NON-SORT:	100 sheets for top bin
	SORT:	35 sheets (8½-″ × 11″) (A4) 25 sheets (8½″ × 14″) (B4) 15 sheets (11″ × 17″) (A3)
	GROUP:	25 sheets (8½″ × 11″) (A4) 15 sheets (8½″ × 14″) (B4) 10 sheets (11″ × 17″) (A3)
	STAPLE SORT:	25 sheets (8½″ × 11″) (A4) 15 sheets (8½″ × 14″, 11″ × 17″) (B4, A3)
Paper size	Top bin:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
	Sort bins:	Max. 11″ × 17″, A3 Min. 8½″ × 5½″, A5
Stapling capacity	25 sheets (20 lbs.) (80 g/m^2)	
Power supply	Drawn from the copier.	

6. SF-D20



Paper size	8½″ × 11″ to 11″ × 17″, B5 to A3
Paper capacity	500 sheets of 20 lb. bond paper, 50 to 80 g/m^2 Total of 1,000 sheets of 20 lb. bond paper with an optional 500-sheet paper drawer installed.

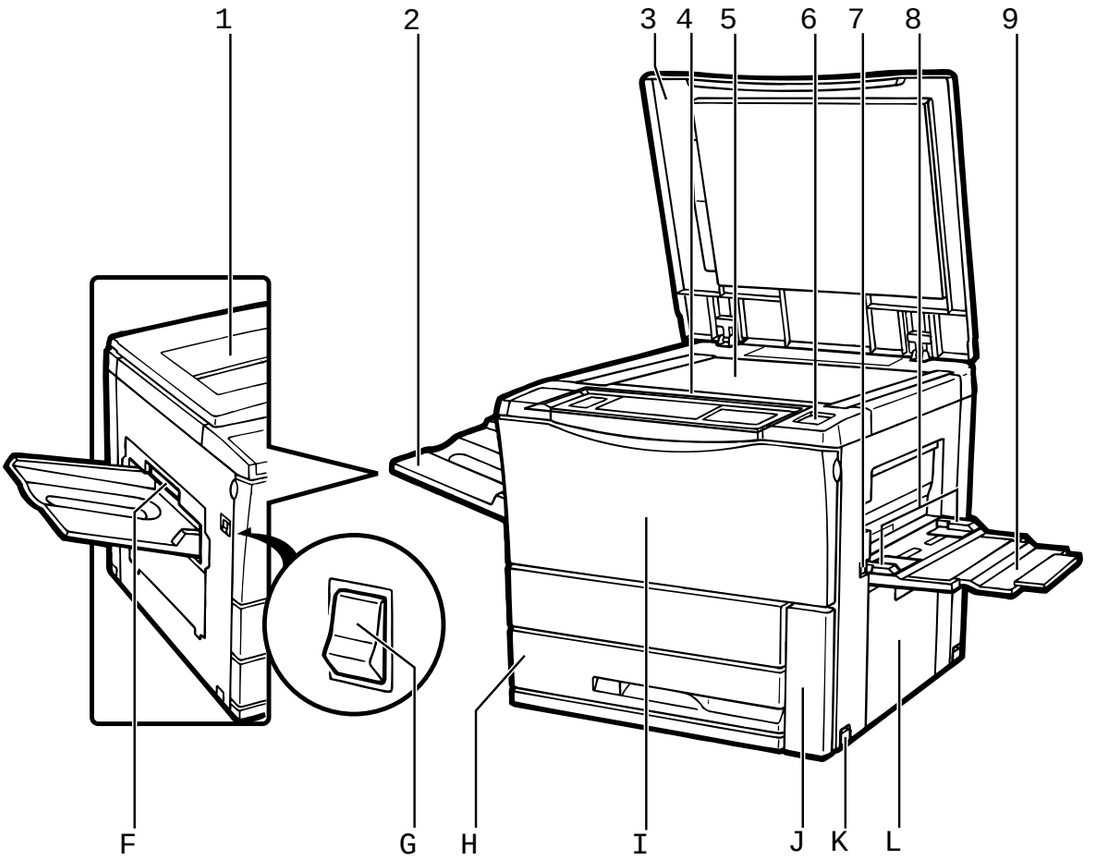
7. SF-D21



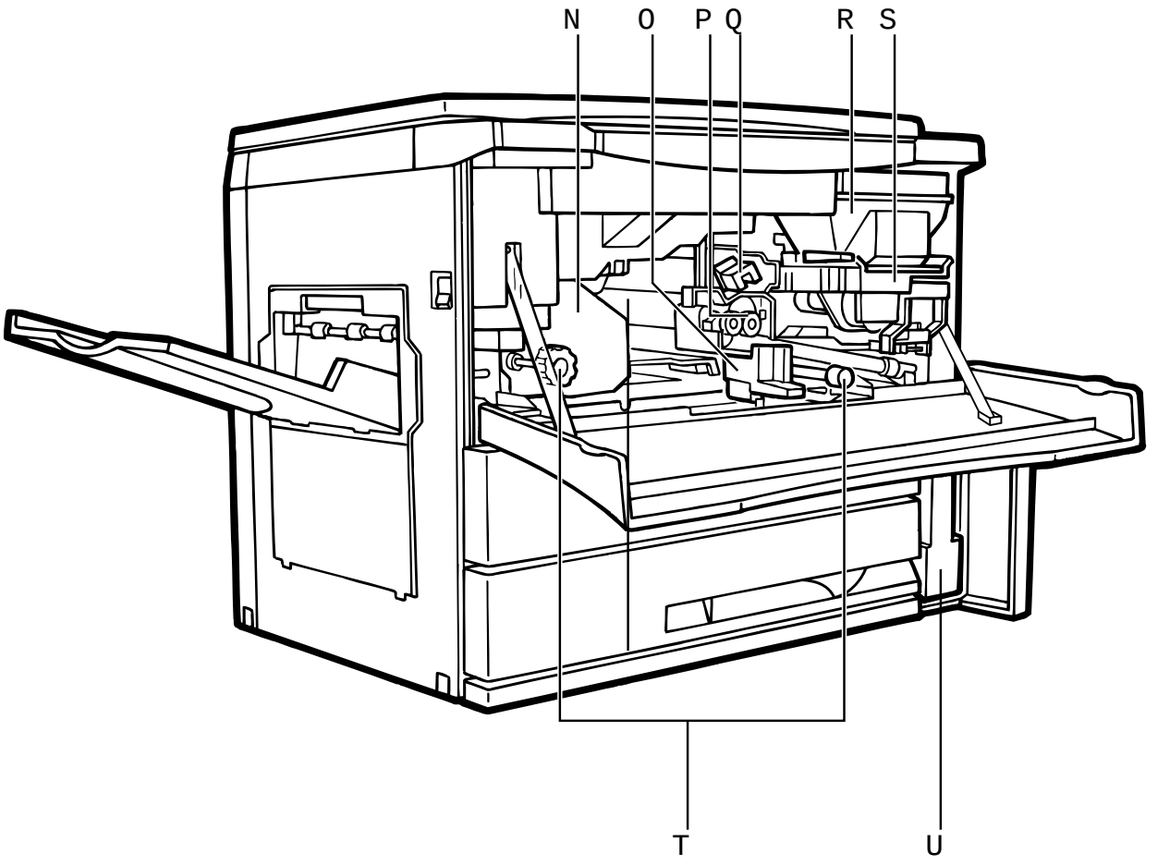
Paper size	8½″ × 11″ to 8½″ × 14″, B4 to B5
Paper capacity	1,000 sheets of 20 lb. bond paper, 50 to 80 g/m^2 Total of 1,500 sheets of 20 lb. bond paper with an optional 500-sheet paper drawer installed.

[4] COMPONENT IDENTIFICATION

1. External view

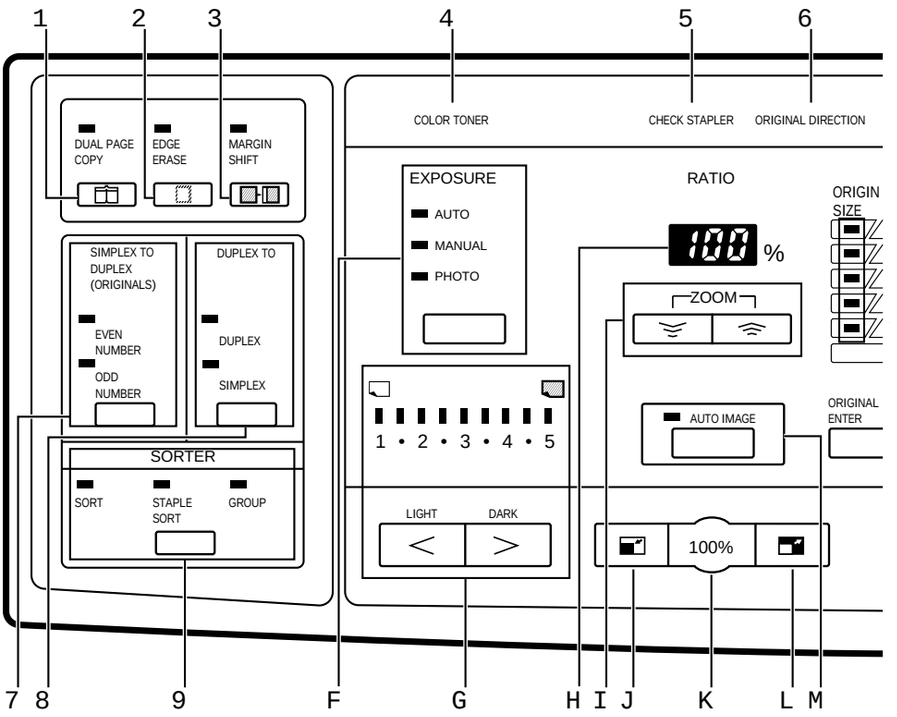


1	Original cover storage compartment	2	Copy receive tray	3	Original cover
4	Operation panel	5	Original glass	6	Paper clip tray
7	Paper feed tension release button	8	Paper feed guide	9	Manual paper feed tray
F	Exit panel release handle	G	Power switch	H	Paper feed cassette(module slots)
I	Front panel	J	Waste toner container access cover	K	Copier lift handle
L	Side panel				

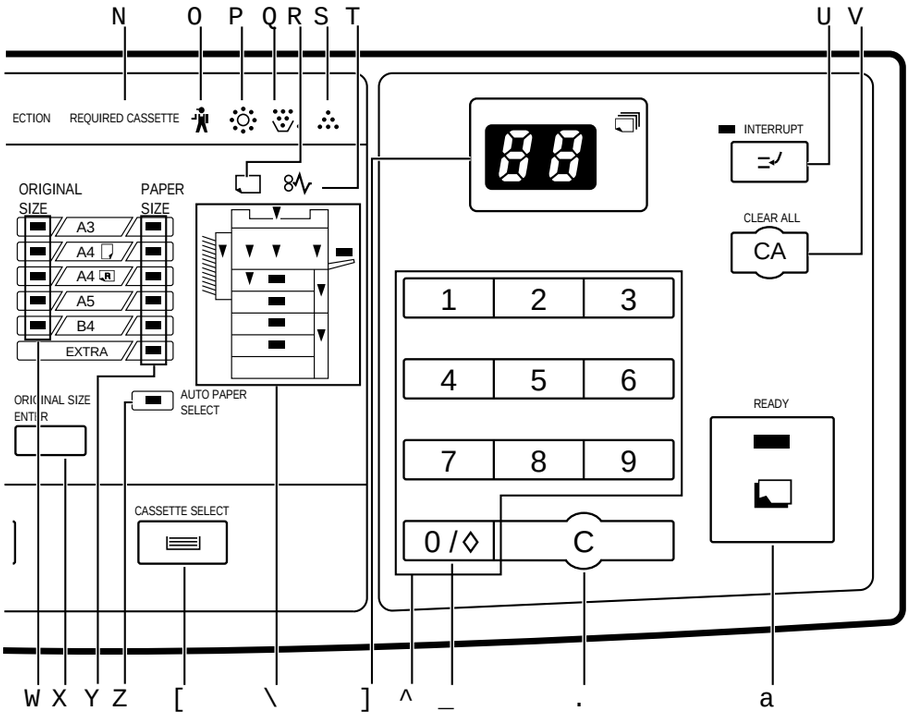


N	Fuser	O	Paper transport block accessing lever	P	Drum unit
Q	Corona unit	R	Toner cartridge and lock lever	S	Developing unit and lock lever
T	Feed roller knobs	U	Toner collect container		

2. Operation panel

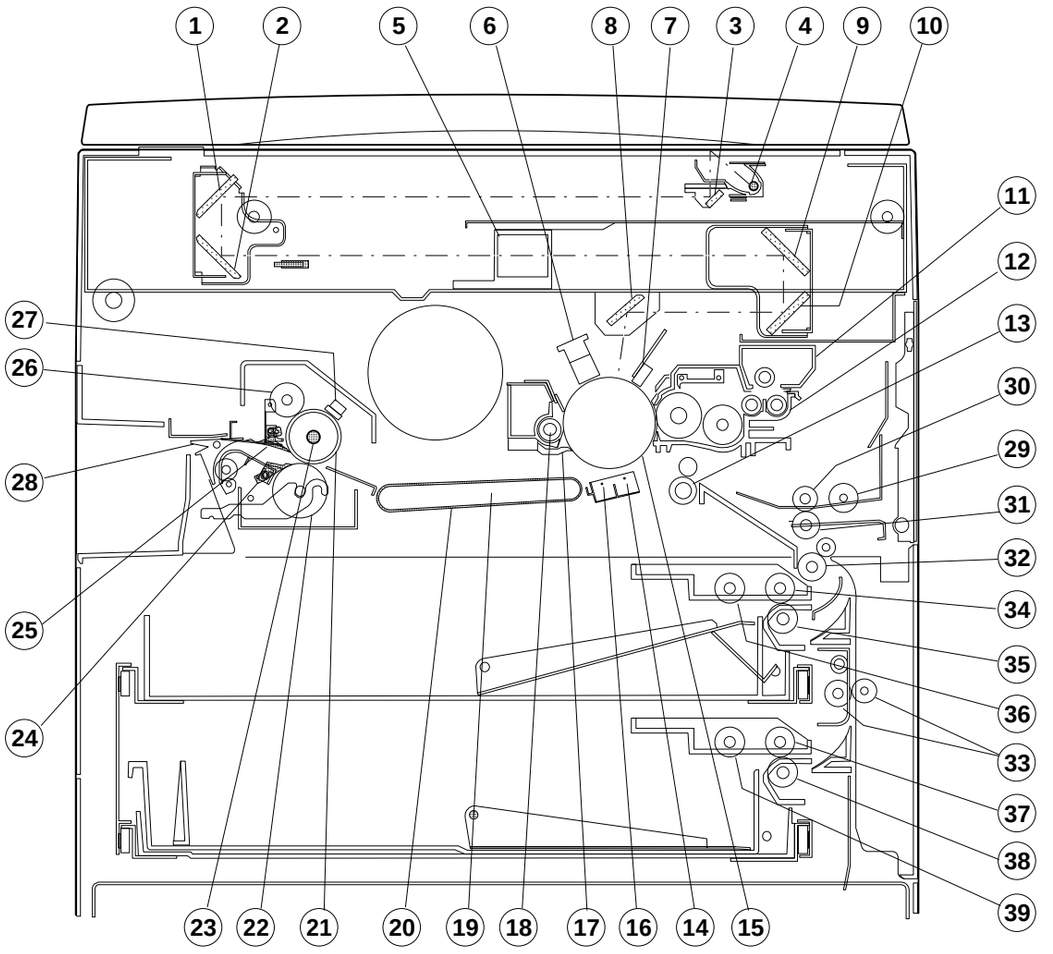


1	Dual page copy key/status lamp	2	Edge erase key/lamp	3	Margin shift key/status lamp
4	Color toner indicator lamp	5	Stapler status lamp	6	Original direction status lamp
7	Simplex to duplex copy key	8	Duplex original copy key	9	Sorter key/status lamp
F	Copy density select key/status lamp	G	Manual density control key/status lamp	H	Zoom ratio display
I	Zoom key	J	Reduce key	K	Normal ratio key 1:1
L	Enlarge key	M	Automatic zoom select key/status lamp		



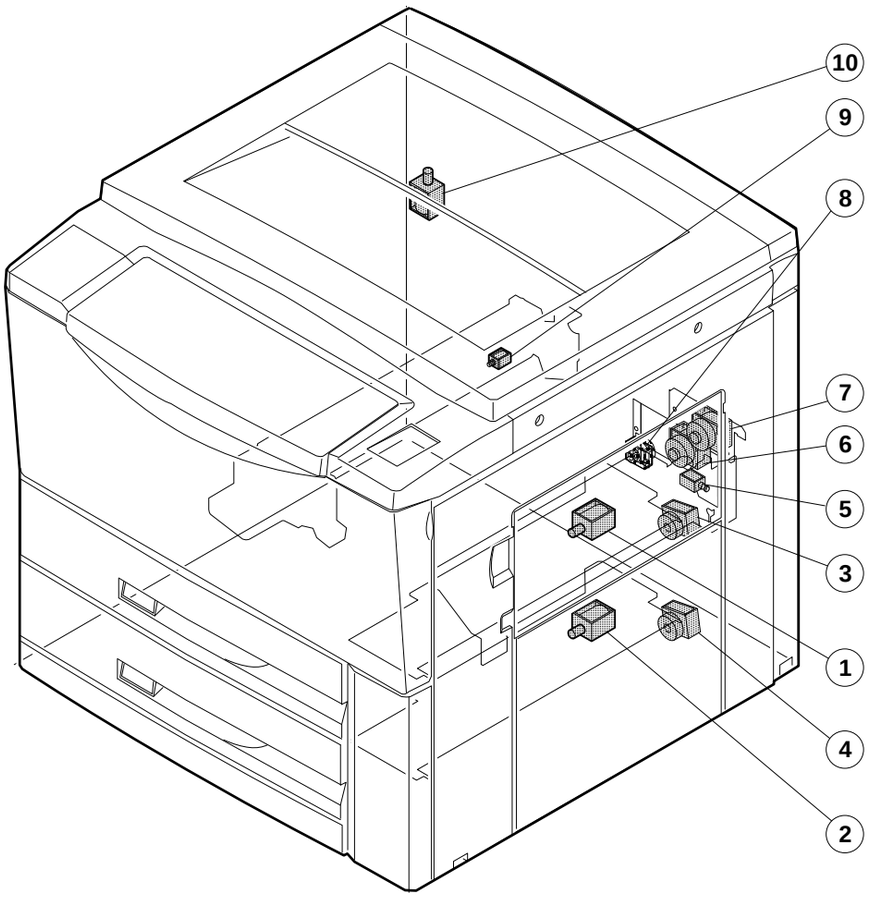
N	Copy paper size status lamp	O	Maintenance lamp	P	Developer replacement lamp
Q	Toner collect lamp	R	Paper refill lamp	S	Toner refill lamp
T	Paper misfeed lamp	U	Pause key/status lamp	V	Clear all key
W	Original size display lamp	X	Paper size display lamp	Y	Automatic paper select display lamp
Z	Cassette select key	[	Paper location/misfeed lamp	\	Copy number window
]	Copy number entry key	^	Zero/read key	_	Cancel key
'	Print switch				

3. Internal view



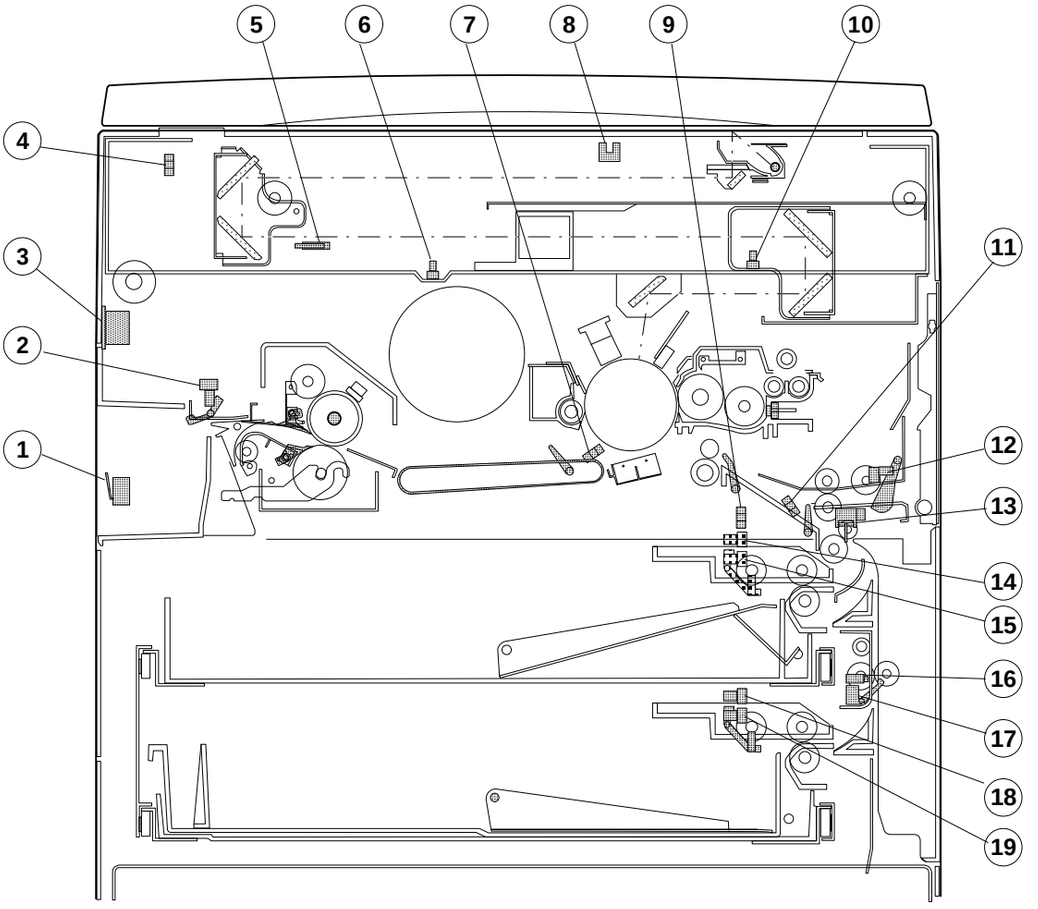
1	#2 mirror	2	#3 mirror	3	#1 mirror
4	Copy lamp	5	Lens unit	6	Main corona unit
7	Blank lamp	8	#6 mirror	9	#4 mirror
F	#5 mirror	G	Developing tank toner box	H	Developing tank
I	Resist roller	J	Transfer corona	K	Drum
L	Separation corona	M	Drum separator pawl	N	Cleaner unit
O	Suction unit	P	Suction belt	Q	Upper heat roller
R	Lower heat roller	S	Heater lamp	T	Lower separator pawl
U	Upper separator pawl	V	Upper cleaning roller	W	Fuser thermistor
X	Delivery roller	Y	Manual feed takeup roller	Z	Manual feed paper feed roller
[	Counter manual feed roller	\	Transport roller (upper)	]	Transport roller (lower)
^	Upper paper feed roller	_	Retard roller	‘	Upper paper takeup roller
a	Lower paper feed roller	b	Retard roller	c	Lower paper takeup roller

4. Clutches, solenoids

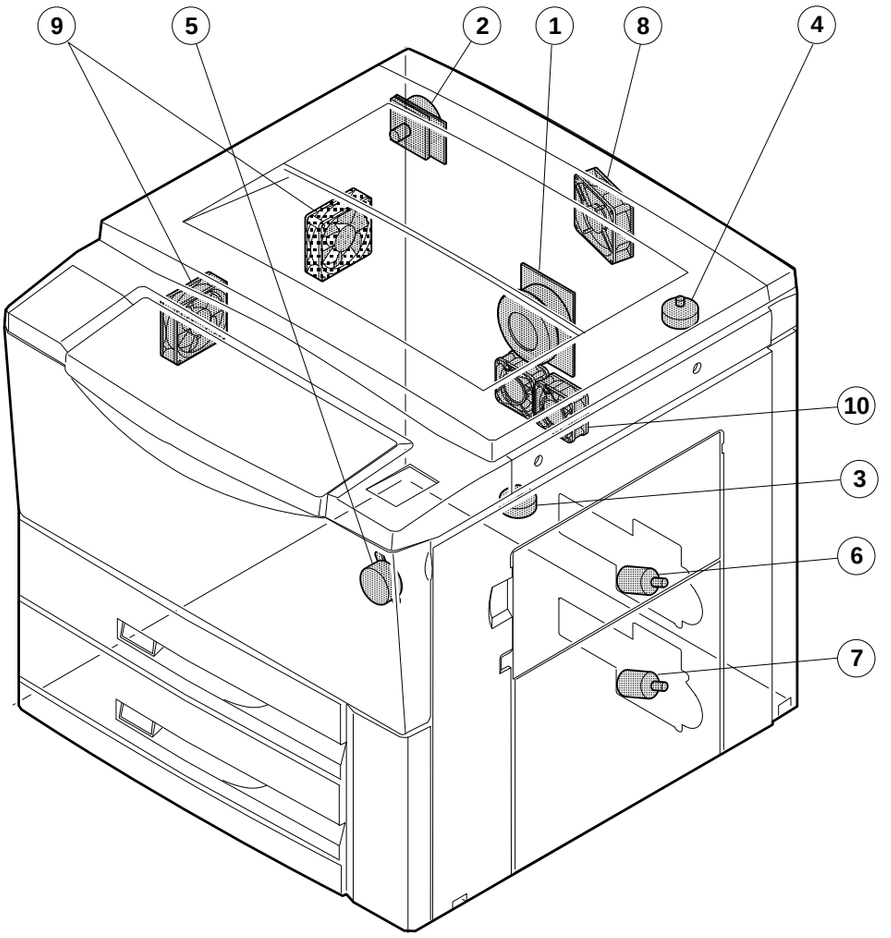


	Signal name	Name	Function
1	CPFS1	Upper cassette paper feed solenoid	For tensioning takeup roller
2	CPFS2	Lower cassette paper feed solenoid	For tensioning takeup roller
3	CPFC1	Upper cassette paper feed clutch	For actuating paper feed roller
4	CPFC2	Lower cassette paper feed clutch	For actuating paper feed roller
5	MPFS	Manual paper feed solenoid	For tensioning takeup roller
6	TRCL	Transport roller clutch (slow)	For actuating transport roller (slow)
7	TRCH	Transport roller clutch (fast)	For actuating transport roller (fast)
8	RRC	Resist roller clutch	For actuating resist roller
9	PSPS	Paper separation solenoid	For actuating paper separation solenoid
F	DGS	Double side gate solenoid	For actuating double side gate

5. SF-2022/2027 sensors



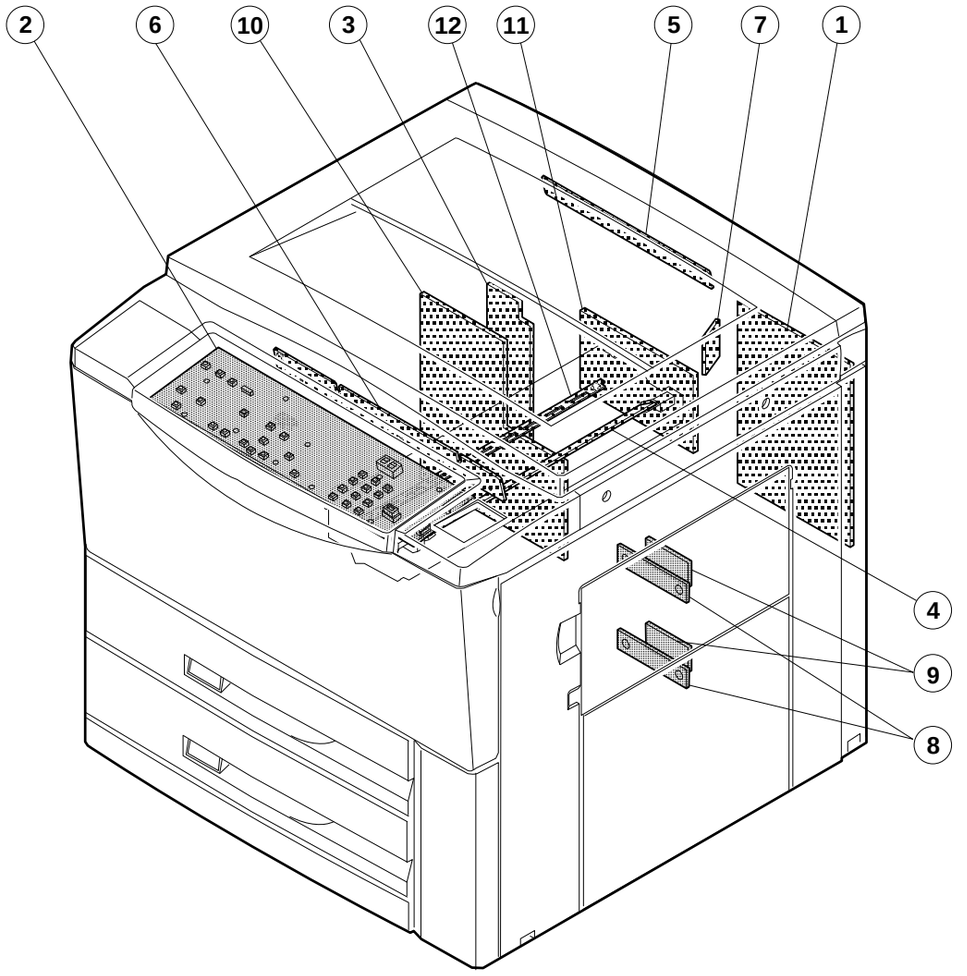
	Name	Type	Function	Output
1	CSWL	Microswitch	Cover switch, (left)	On when closed
2	POD	Transmissive photosensor	Paper exit sensor	Low when paper passes over
3	P-SW	See-saw switch	AC power switch	—
4	MHPS	Transimissive photosensor	Mirror home position sensor	High when scanner at home postion
5	CSWF	Microswitch	Cover switch, (front)	On when closed
6	LHPS	Transimissive photosensor	Lens home position sensor	Low when lens at home postion
7	PSD	Transimissive photosensor	Paper separation sensor	High when paper passes over
8	OCSW	Transimissive photosensor	Original cover switch	Low when cover is open
9	PPD2	Transimissive photosensor	Paper transport sensor	Low when paper passes over
F	MBHPS	Transimissive photosensor	Mirror home position sensor	Low when mirror at home position
G	PPD1	Transimissive photosensor	Paper transport sensor-1	Low when paper passes over
H	PED1	Transimissive photosensor	Manual feed paper sensor	Low when paper passes over
I	TFD	Transimissive photosensor	Full waste toner sensor	Low when full waste toner detected
J	LUD1	Transimissive photosensor	Upper cassette liftup sensor	Low when lift plate detected
K	PED2	Transimissive photosensor	Upper cassette paper sensor	Low when paper detected
L	CSWR	Microswitch	Doorswitch (right)	On when closed
M	PID	Transimissive photosensor	Paper transport sensor	High when paper passes over
N	LUD2	Transimissive photosensor	Lower cassette liftup sensor	Low when lift plate detected
O	PED3	Transimissive photosensor	Lower cassette paper sensor	Low when paper detected



6. Motors

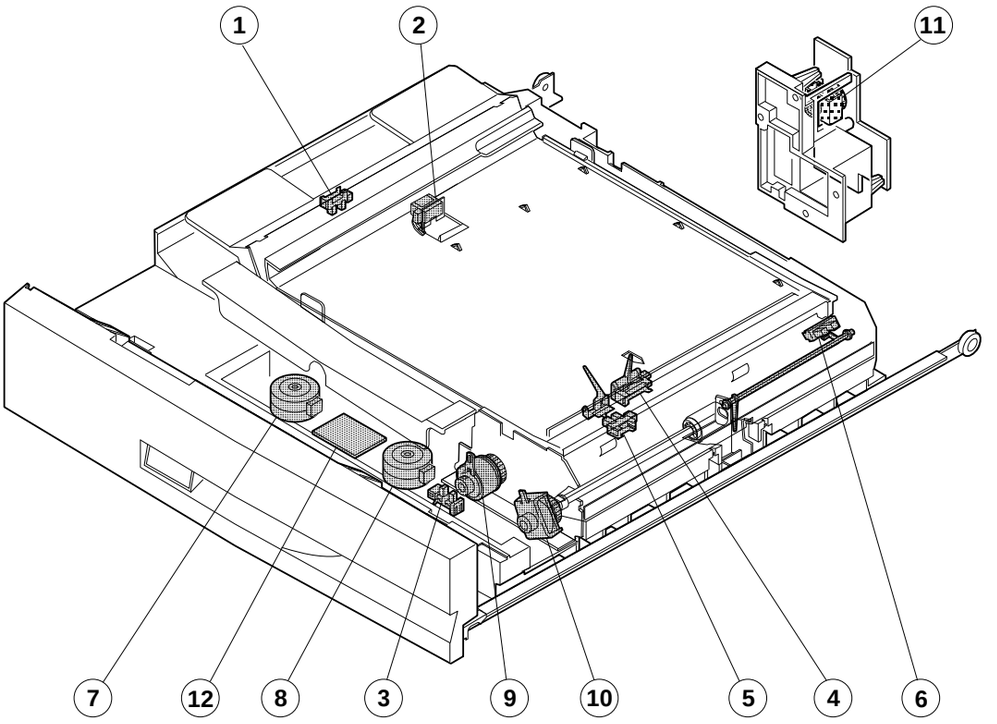
	Signal name	Name	Type	Function
1	MM	Main motor	DC, brushless	Driving copier and ADU option
2	SM	Mirror motor	DC, brushless	Driving optical system mirror bases A and B
3	LEM	Lens motor	DC, stepping	Driving optical lens
4	MBM	#4/5 mirror base motor	DC, stepping	Driving optical mirror base C
5	TM	Toner motor	DC, synchronous	Supplying toner
6	LUM1	Upper cassette liftup motor	DC, brush	Lifting upper paper feed cassette baseplate
7	LUM2	Lower cassette liftup motor	DC, brush	Lifting lower paper feed cassette baseplate
8	CFM	Cooling fan motor	DC, brushless	Cooling optical system
9	VFM	Ventilation fan motor	DC, brushless	Ventilating fuser area
F	SFM	Suction fan motor	DC, brushless	Ventilating process unit area

7. Board list



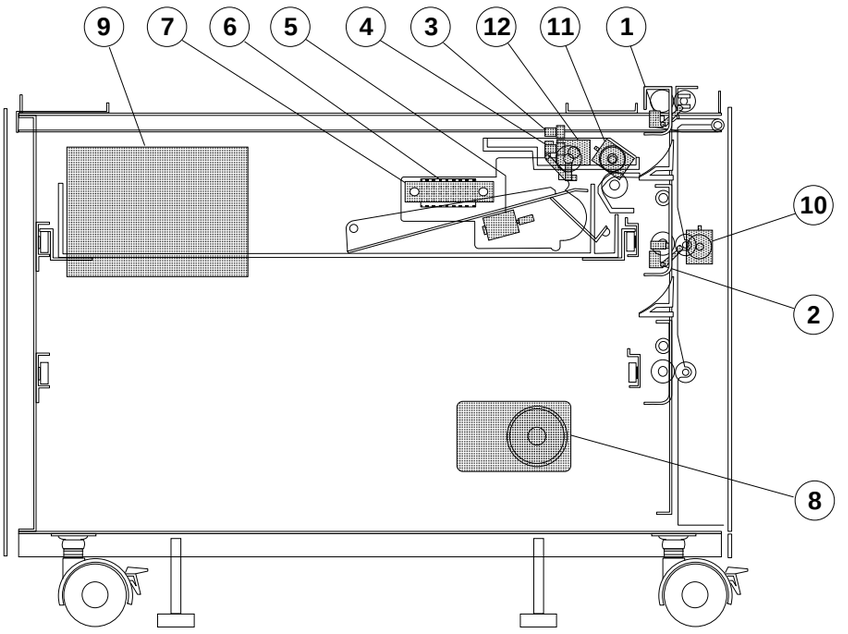
	Name	Type	Note
1	Main PWB	Common	Controlling mains
2	Operation PWB	Common to Japan models, export 2022, 2027	Controlling operator input, display
3	AC PWB	Common to Japan models, export 100V, 200V	Supplying AC power
4	Blank lamp PWB	Common	Controlling blank lamps
5	Original sensing light emitting PWB	Common to Japan models, export 2027	Sensing original size
6	Original sensor light receive PWB	Common to Japan models, export 2027	Sensing original size
7	AE PWB	Common	Automatic exposure sensor
8	Cassette paper size PWB	Common	Sensing cassette paper size
9	Liftup motor PWB	Common	Driving paper cassette bottom plate liftup
F	DC power supply unit	100V/200V series	Supplying DC power
G	High voltage transformer	Common	Supplying process unit high voltage and developing bias voltage
H	Discharge lamp	Common	Driving discharge lamps

8. Duplex copy tray



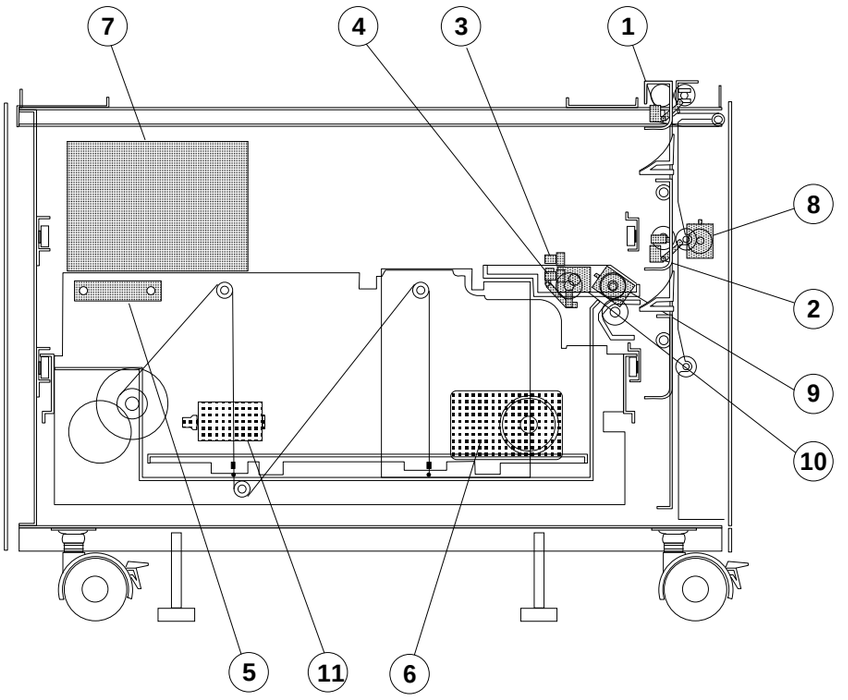
	Signal name	Type	Name	Output
1	APHPS2	Transimissive photosensor	ADU rear plate home position sensor	Low when at home position
2	DPPD1	Transimissive photosensor	ADU paper transport sensor-1	High when paper passes over
3	APHPS1	Transimissive photosensor	ADU alignment plate home position sensor	Low when over home position
4	DPP2	Transimissive photosensor	ADU paper transport sensor-2	High when paper detected
5	DTPID	Transimissive photosensor	ADU tray sensor	High when paper detected
6	DPFD	Transimissive photosensor	ADU paper entry sensor	High when paper detected
7	PAM2	DC stepping motor	ADU rear plate motor	
8	PAM1	DC stepping motor	ADU alignment plate motor	
9	DPFC	Magnetic clutch	ADU paper feed clutch	
F	DRRC	Magnetic clutch	ADU counter roller clutch	
G	DDC	Magnetic clutch	ADU clutch	
H	ADUPWB	Duplex copy tray load driving	Diode PWB	

9. Desk unit (SF-D20)



	Signal name	Name	Function
1	DPOD1	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
2	DPOD2	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
3	DLUD1	Desk cassette liftup sensor	Cassette liftup sensor (Low when lift plate detected)
4	DPED1	Desk cassette paper sensor	Cassette paper sensor (Low when paper detected)
5	DLUM1	Desk cassette liftup motor	Cassette liftup drive motor
6	—	Liftup motor PWB	—
7	—	Cassette paper size PWB	—
8	DM	Desk drive motor	Desk main motor
9	—	Desk main PWB	—
F	DTRC	Desk transport roller clutch	Transport roller drive
G	DPFC1	Desk paper feed clutch	Paper feed roller drive
H	DPFS1	Desk paper feed solenoid	Paper takeup roller drive

10. Desk unit (SF-D21)



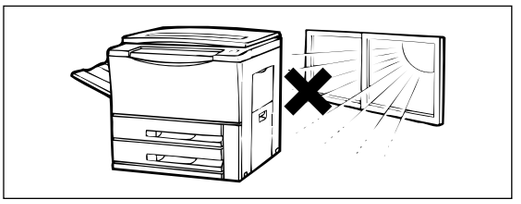
	Signal name	Name	Function
1	DPOD1	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
2	DPOD2	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
3	DLUD2	Desk cassette liftup sensor	Cassette liftup sensor (Low when lift plate detected)
4	DPED2	Desk cassette paper sensor	Cassette paper sensor (Low when paper detected)
5	—	Cassette paper size PWB	—
6	DM	Desk drive motor	Desk main motor
7	—	Desk main PWB	—
8	DTRC	Desk transport roller clutch	Transport roller drive
9	DPFC2	Desk paper feed clutch	Paper feed roller drive
F	DPFS2	Desk paper feed solenoid	Paper takeup roller drive
G	LCCM	Large capacity cassette motor	Cassette tray liftup drive motor

[5] INSTALLATION

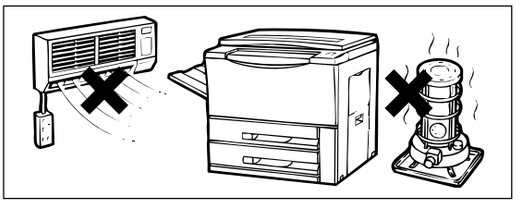
1. Installing conditions

(1) Machine environment

1 Avoid Installation in direct sunlight or bright locations near a window.
Direct sunlight may cause damage to components and the original cover deformation. Frosted glass may also produce the same effect.



2 Avoid installation in a hot or damp area, or where rapid changes in humidity occur. (For example; near an air conditioner.)
This may cause paper to dampen, or frost to form inside the copier, and may lead to a misfeed and deterioration in copy quality.

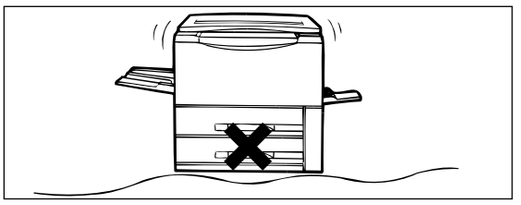


The recommended environmental conditions are:
20 to 25 degrees Centigrade (68 to 77 F) and 60 to 70%RH.

The nominal environmental conditions are:
15 to 30 degrees Centigrade and 25 to 85%RH.
If the temperature is 35 degrees C and the humidity should be 85%RH.

3 Avoid installation in a place where dust or vibration is encountered.
Dust deposit inside the copier may lead to a deterioration of copy quality or machine trouble.

4 Do not install the copier on an unstable or uneven floor. This copier must be placed on a level surface to permit proper functioning.



5 Avoid installation in a place where the ventilation or air circulation is poor.

6 Never install the copier near inflammable materials or in the presence of ammonia fumes.
Installation near a diazo copy machine may lead to a deterioration of copy quality or machine malfunction.

7 Install the copier near a wall outlet.

(2) Space around the copier

The copier must be installed at least 10cm away from the wall in order to permit fan ventilation and to allow proper machine operation.

(3) Machine table

Install the copier on a level surface using the water level (UKOGM0054CSZZ).

IMPORTANT: Installing the copier on an unlevel surface may effect copy quality an machine performance.

(4) Power source

1 The power supply line should have a capacity of more than 15A, capable of supplying more than 90% of the rated voltage at full load.

2 Do not use an extension cord, or operate any other equipment from the same wall outlet.

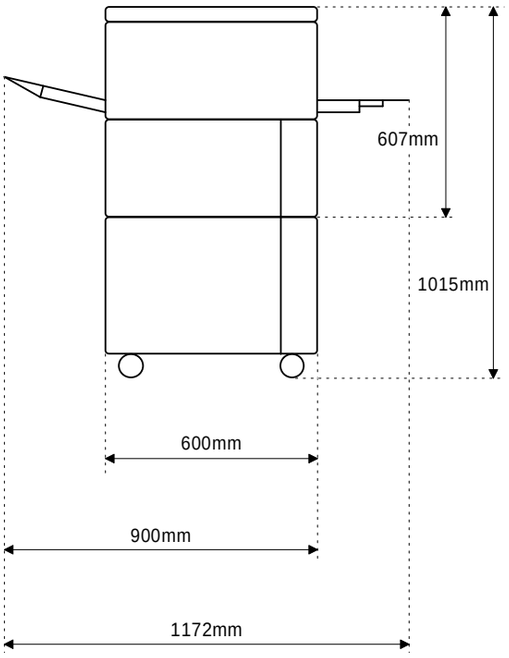
(5) Ground connection

To avoid electrical hazard, use the properly grounded wall outlet only.

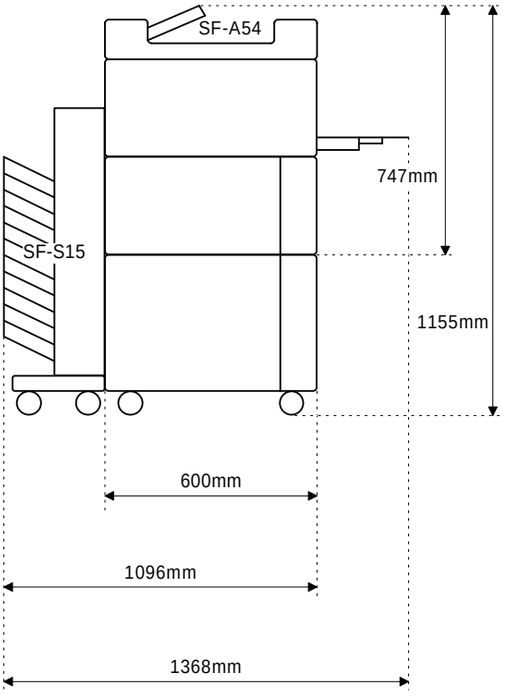
2. Installation space

A sufficient space must be reserved for proper ventilation by the cooling fan and for proper functioning of the machine. In addition, the machine service (preventive maintenance) space is required.

(1) Copier and desk



(2) Copier, desk, and option unit



(3) At least a space of 300mm is needed for both sides of the machine for servicing.
Installation of the machine largely affects the machine performance, the following must be well noted.

3. Installation procedure

(1) SF-2022/SF-2027

1. Releasing optical locks

A Removing the #2/3 mirror unit lock

Unfasten the screw that holds the #2/3 mirror unit on the left side of the machine.

B Releasing the lens and #4/5 mirror unit from lock

Open the paper feed tray and remove two screws that hold the #4/5 mirror unit.
Open the front panel and remove one screw that holds the lens under the operation panel.

2. Fuser unit set up

A Removing the fuser unit

1 While holding up the paper exit handle, open the paper exit cover.
Remove the front panel band on the left side of the front panel in a manner shown in the figure.

2 Remove the fuser unit holding two screws.

3 Hold the fuser unit rotating knob. Push on the front panel and gently remove the fuser unit. Do not let the locatot pins undr the fuser unit hit the ribs on the front cover.
Hold the fuser unit hand carry strap and remove the fuser unit.

B Tensioning the heat roller

Move the tension levers on both sides of the fuser unit to the position shown in the figure. With this, tension is applied to the upper and lower heat rollers.

C Installing the cleaning roller

1 Remove two screws that hold the fuser cover, and slide the fuser cover to front then lift.

2 Remove the spring secured to the front side of the fuser unit.
Remove holding bracket securing screw on the rear side of the fuser unit, and remove holding bracket.

Keep the holding bracket and screw for later use.

3 Route the cleaning roller gearwheel through the round hole in the rear side of the fuser unit and insert the cleaning roller into the round hole on the front side. Note the bushings at both ends of the cleaning roller. Fit the bushings into the appropriate slots in the fuser unit frame.

4 Hook the spring to its previous position, replace the holding bracket to its position, then secure it with the one screw.
Ensure the spring and holdi9ng bracket are as shown in the figure; holding the bushing.

5 Replace the fuser cover removed in Step 1, and fasten it with two screws.

6 Insert the locator pin under the fuser unit into slot. Gently push fuser unit all the way in.
Make sure now that the locator pins of the copier are firmly engaged into two locator holes of the fuser unit mounting bracket.
Secure fuser unit with two screw removed in 2 of **A**, and close the paper exit.
Replace the front panel band that removed in 1 of **A**.
Close the paper exit cover.

3. Cleaning corona unit

A Clean the main corona unit

1 Push down the hook of the main corona unit while removing the main corona unit from the copier.

2 Unfasten the one screw holding the electrode on the back of the main corona unit and remove the electrode.

3 Very carefully clean the top of the electrode using the electrode cleaner. Repeat this procedure a few times.

NOTES:

- Never move the cleaner in any direction except up and down when the cleaner is in contact with the electrode..
- Be sure to clean away the whole area evenly. Never clean only a portion of the electrode.

4 Install the electrode and secure it with the one screw.

5 Insert the main corona unit all the way into machine. Guides must be inserted into proper slots.

B Clean the transfer/separation corona wires

1 Tilt the paper transport block accessing lever to left. Rotate the transfer corona lock plate clockwise using the scale or flat tip screwdriver to release it from the lock. Remove the transfer/separation corona unit from the copier.

2 Unhook the section A of the separation corona guide, slide the separation corona in the direction of the arrow, and remove the separation corona guide from the corona housing.

3 Squeeze the transfer/corona wire with the corona wire cleaner. Move the cleaner in the direction of the arrow to clean the wire.

4 Install the separation corona guide to the corona housing. Insert the corona assembly along the guide of the transfer/separation corona unit. Rotate the transfer corona lock plate counterclockwise, return the paper transport block accessing lever clockwise, and close the front panel.

4. Installing accessories

A Install the copy receive tray

5. Setting up the upper paper cassette

A Remove the packing screw of the cassette.

Pull out the cassette drawer by lifting while pulling out drawer.
Remove the one packing screw that secures the paper tension plate of the cassette.

In the case of the B5R cassette, it has been set at the factory.

B Removing the cassette

Hold up the cassette grasping the both sides of the cassette and pull it all the way out.

C Change the size using the side plates F and R.

Remove two screws that hold the side plates F and R. Set the plates into their position shown with notches, and secure with the two screws.

D Insert the rear plate

Remove the rear plate and set the plate into the position indicated for the desired paper sixe.

E Set the size detect spacer

Change the position of the size detect spacer. Move the spacer to the appropriate positions.

F Change the paper size indication plate

Remove the paper size indication plate. Install the plate so the size of the paper can be seen from the window.

Paper sizes are printed on the front and the back of the paper size indicator plate.

G Set the cassette

Hold up both sides of the cassette from back and insert it along the guide rails. Ensure the cassette moves in and out smoothly.

H Load paper

Load paper in the cassette, but not above the maximum line.
Insert the cassette all the way into the machine.

6. Set up the lower paper cassette

A Remove the packing screw of the cassette.

Remove the two packing screw that hold the paper tension plate of the cassette.

B Change the size using the side plates F and R. (set to A3 position at the factory.)

Set the plates into the appropriate positions and secure wach plate with two screws.

C Change the size of the rear plate.

Remove the rear plate. Set the plate into the position indicated for the desired paper size.

D Set the size detect spacer

Change the position of the size detect spacer. Move the size detect spacers to the appropriate positions.

E Change the paper size indication plate

Remove the paper size indication plate. Install the plates so the size of the paper can be seen from the window.
Paper sizes are printed on the front and the back of the paper size indicator plate.

F Load paper

Load paper in the cassette, but not above the maximum line.
Insert the cassette all the way into the machine.

7. Setting developing unit

A Remove the developing unit

1 Open the front panel and pull the developing unit lever forward.

2 Hold the handle of the developing unit and gently pull the developer unit out until it stops. Lift the carrying strap of the developing unit and remove it.

Be sure to lift the developing unit carrying strap, otherwise, the unit may not come out since a locking mechanism is utlzed.

B Load developer

1 Unfasten the 5P connector that connect the toner hopper with the developing unit. Remove four screws that hold the toner hopper on the developing unit, then remove the toner hopper.

2 Pour in the developer in the developer loading port of the developing unit, while rotating the MG gear clockwise with the Phillips screwdriver. Pour in one bag of developer into the developing unit.

3 Install the toner hopper using the four screws that hold the toner hopper to the developing unit and connect the 5P connector between the toner hopper and the developing unit. Note, the harness of the 5P connector must be inserted into the harness clamp.

C Set the developing unit to the copier

Place the developing unit in the copier. Insert the developer unit all the way in, close the developing unit lever and the front panel.

8. Adjust the toner density referance level

Turn the copier power on.

A Adjust the toner density referance level of the developing tank

1 Execute the test command 25 sub 2.

2 In two minutes, the test will complete.

NOTE: Never try to cancel this test command execution. Otherwise, the automatic developer referance adjustment can not be acheived.

3 Exit test command mode.

9. Loading toner

A Loading toner

1 Open the front panel.

2 Shake the toner cartridge left to right and up and down a few times.

Install the toner cartridge along the toner hopper (arrow direction).

3 Firmly hold the toner cartridge in place, and pull the toner cartridge sheet out.
The toner cartridge sheet needs to be completely removed.

Close the front panel.

10. Attaching zoom select label

A Bond the label

The zoom select label that comes with Instruction Manual can be installed as shown

●To attach the label on the copier with the original cover

●To attach the label on the automatic document feeder.

(2) SF-IC11

Before performing the following procedure, be sure to remove the power plug of the copier main unit.

(3) SF-CM11

(4) SF-DM11

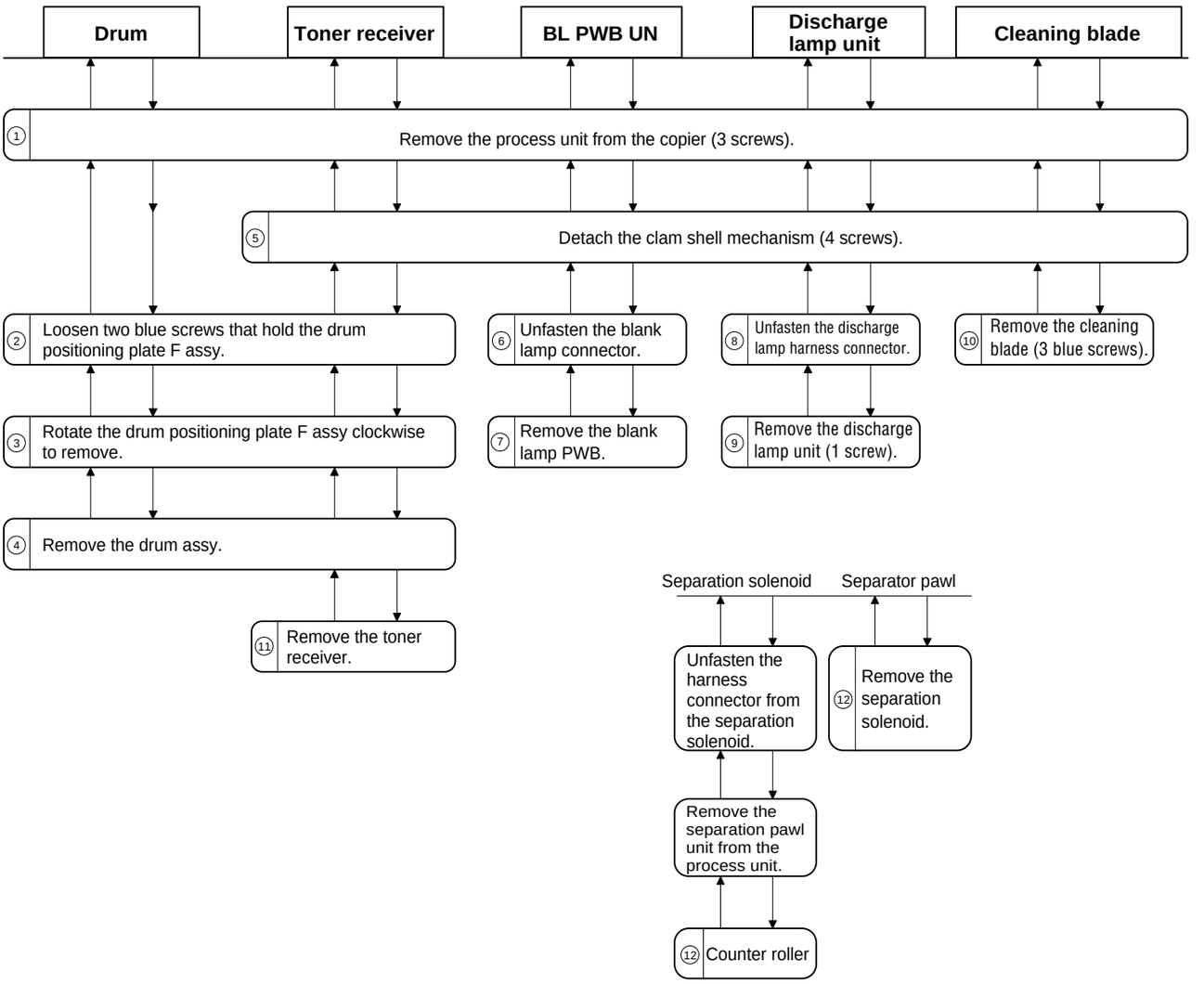
(5) SF-A54

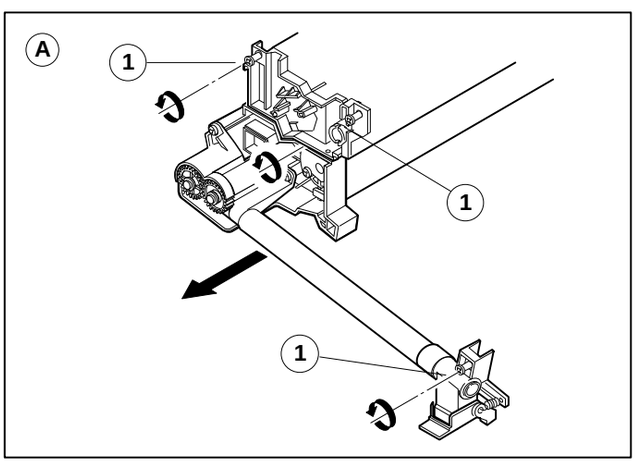
(6) SF-S15 (20-Bin Sorter)

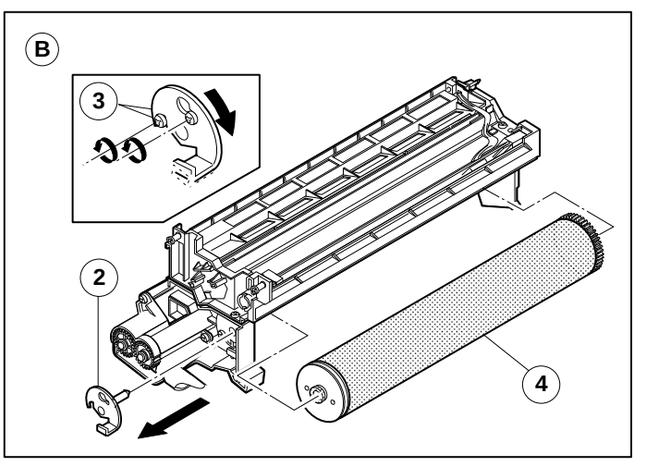
(7) SF-D20/SF-D21

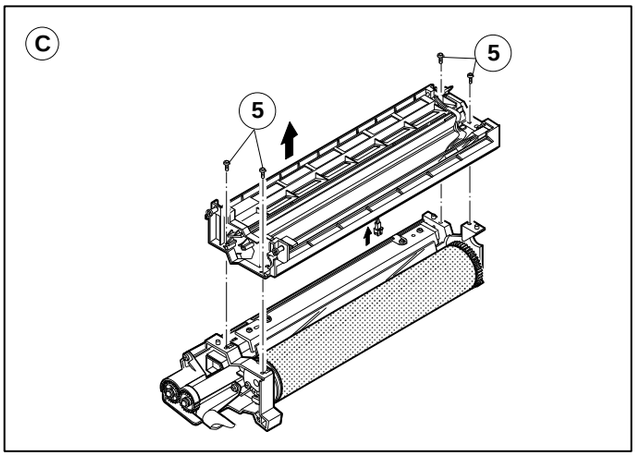
[6] DISASSEMBLY AND REASSEMBLY

1. Process unit


Drum
Toner receiver
BL PWB UN
Discharge lamp unit
Cleaning blade
① Remove the process unit from the copier (3 screws).
⑤ Detach the clam shell mechanism (4 screws).
② Loosen two blue screws that hold the drum positioning plate F assy.
⑥ Unfasten the blank lamp connector.
⑧ Unfasten the discharge lamp harness connector.
⑩ Remove the cleaning blade (3 blue screws).
③ Rotate the drum positioning plate F assy clockwise to remove.
⑦ Remove the blank lamp PWB.
⑨ Remove the discharge lamp unit (1 screw).
④ Remove the drum assy.
⑪ Remove the toner receiver.
Separation solenoid
Separator pawl
Unfasten the harness connector from the separation solenoid.
⑫ Remove the separation solenoid.
Remove the separation pawl unit from the process unit.
⑫ Counter roller



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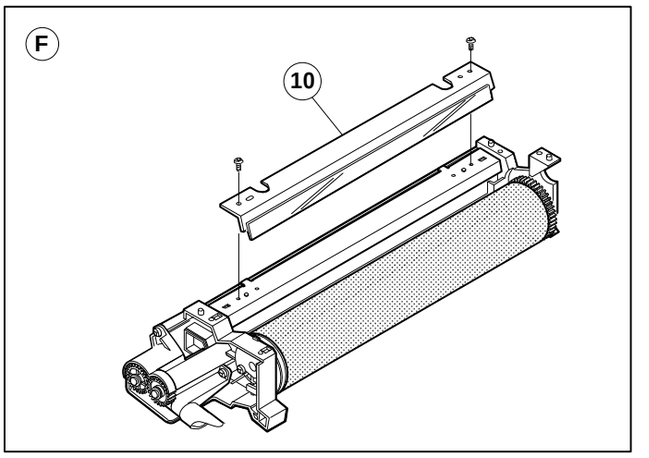
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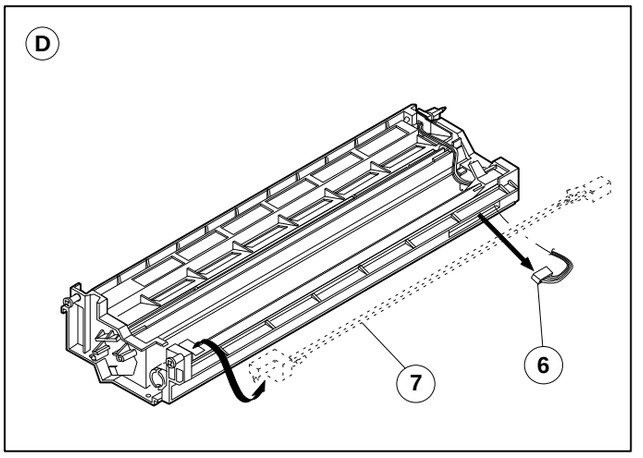
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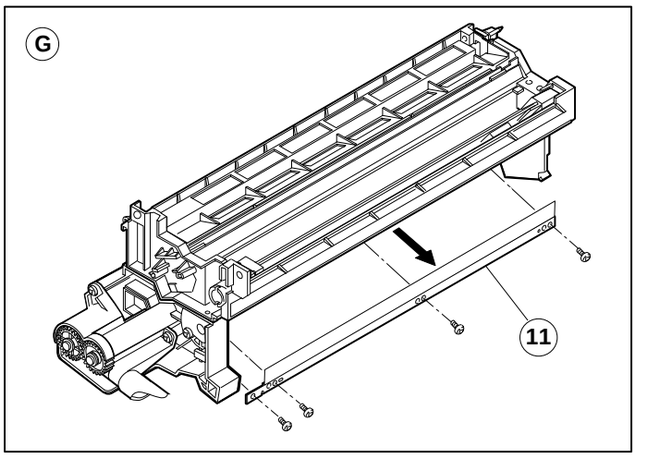
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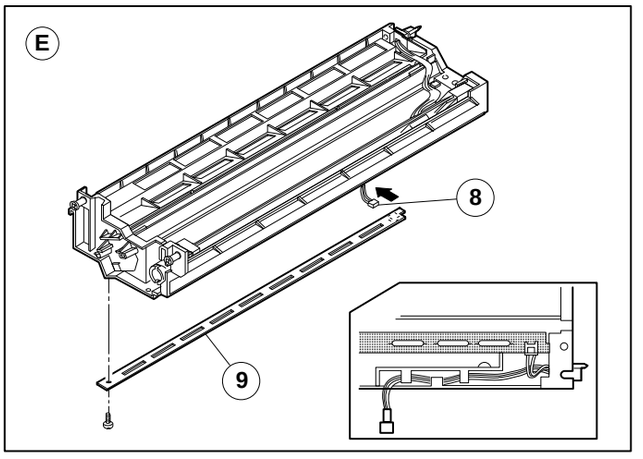
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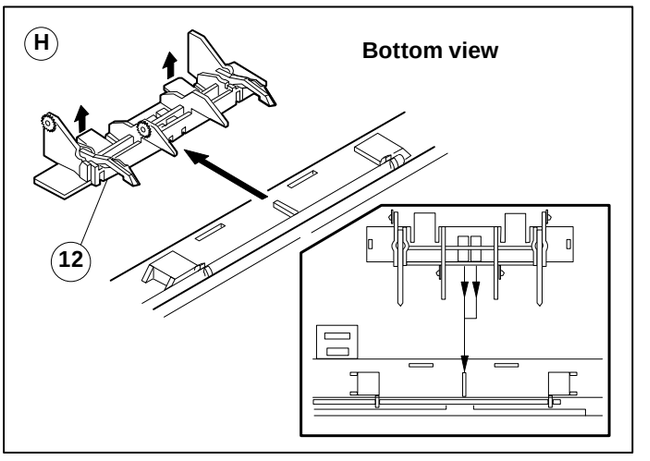
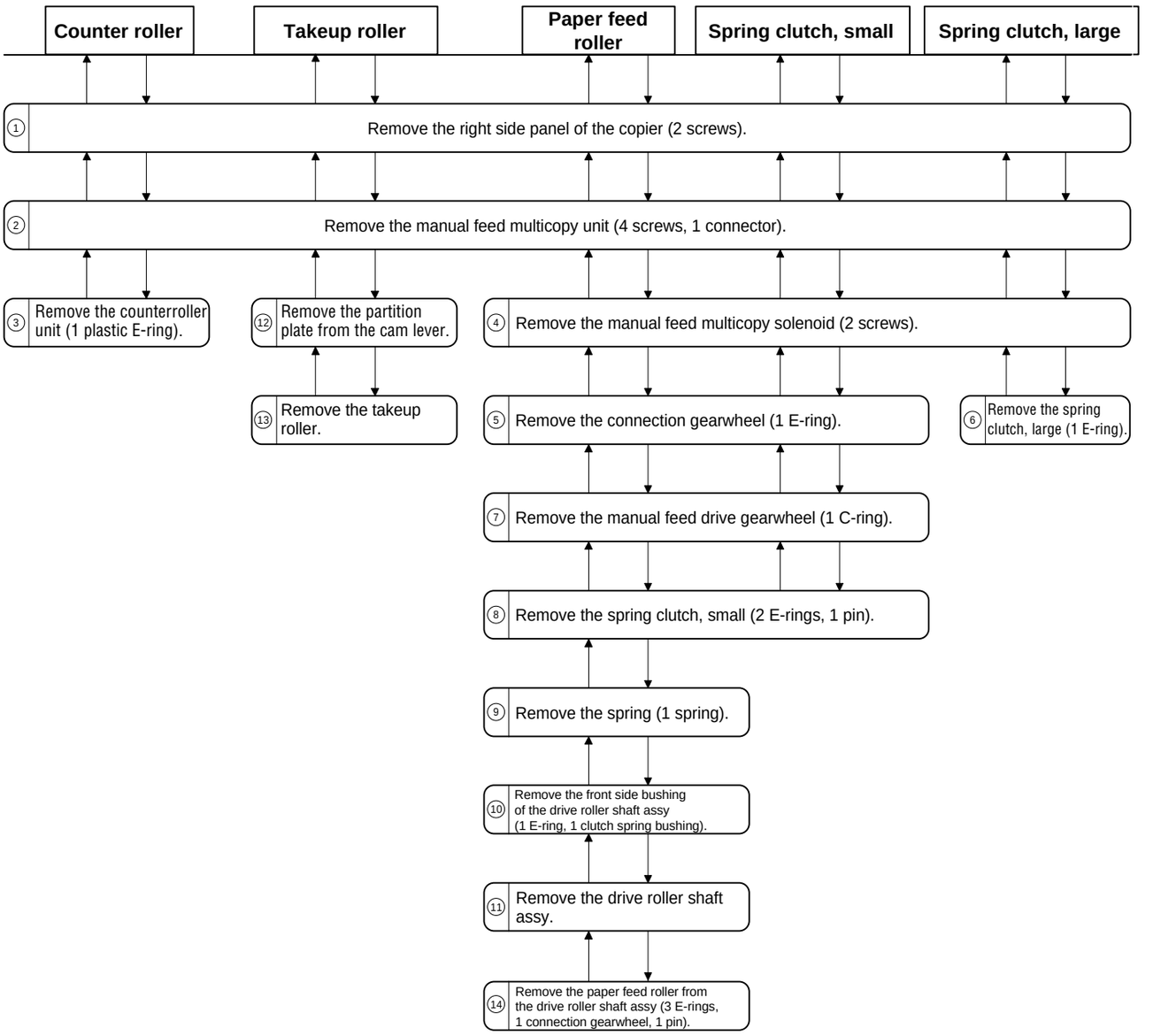
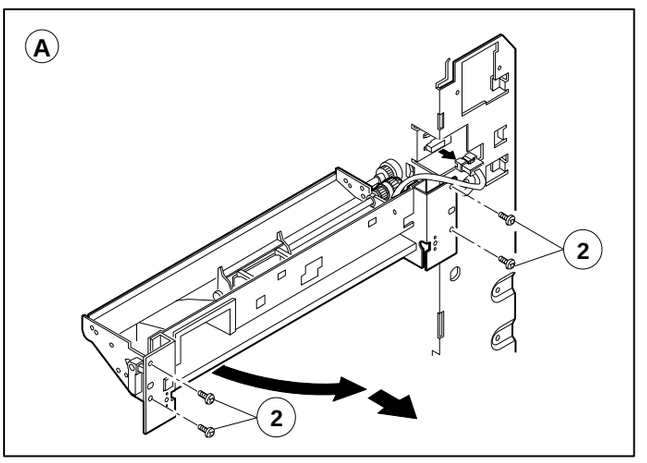
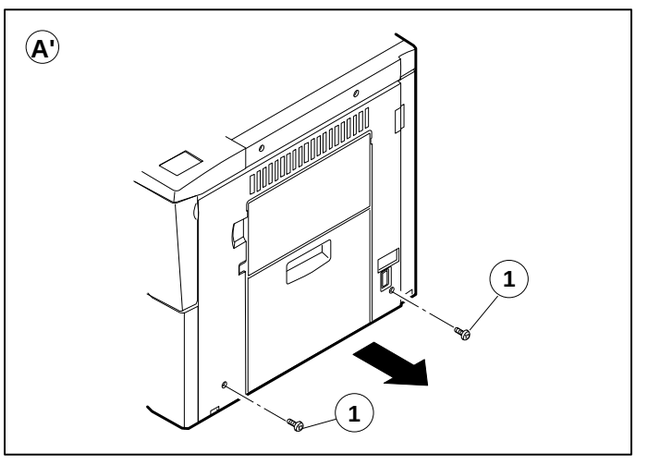
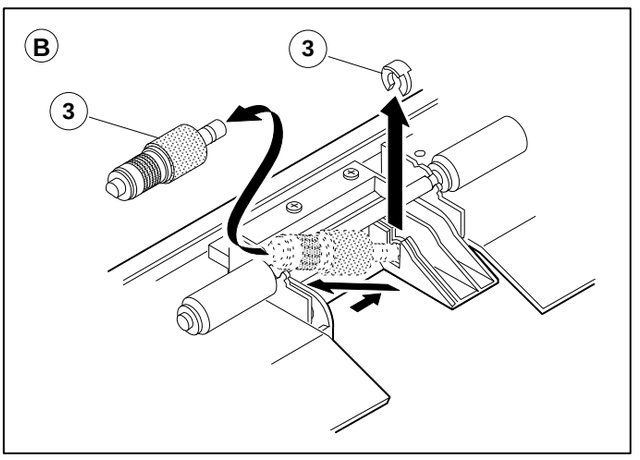

H
Bottom view
12

2. Manual feed multicopy unit


Counter roller
Takeup roller
Paper feed roller
Spring clutch, small
Spring clutch, large
1 Remove the right side panel of the copier (2 screws).
2 Remove the manual feed multicopy unit (4 screws, 1 connector).
3 Remove the counterroller unit (1 plastic E-ring).
12 Remove the partition plate from the cam lever.
13 Remove the takeup roller.
4 Remove the manual feed multicopy solenoid (2 screws).
5 Remove the connection gearwheel (1 E-ring).
6 Remove the spring clutch, large (1 E-ring).
7 Remove the manual feed drive gearwheel (1 C-ring).
8 Remove the spring clutch, small (2 E-rings, 1 pin).
9 Remove the spring (1 spring).
10 Remove the front side bushing of the drive roller shaft assy (1 E-ring, 1 clutch spring bushing).
11 Remove the drive roller shaft assy.
14 Remove the paper feed roller from the drive roller shaft assy (3 E-rings, 1 connection gearwheel, 1 pin).



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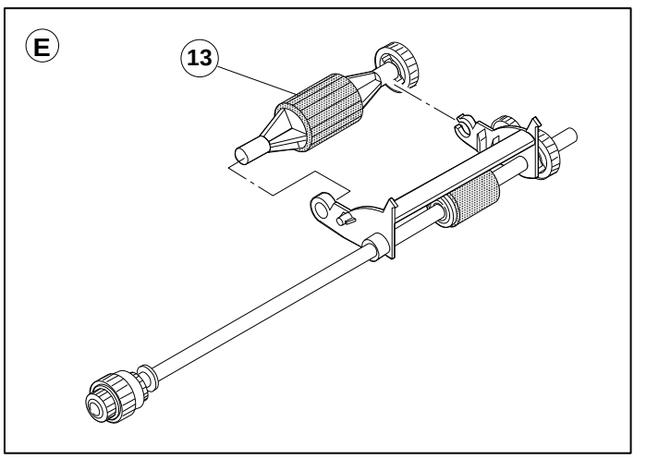
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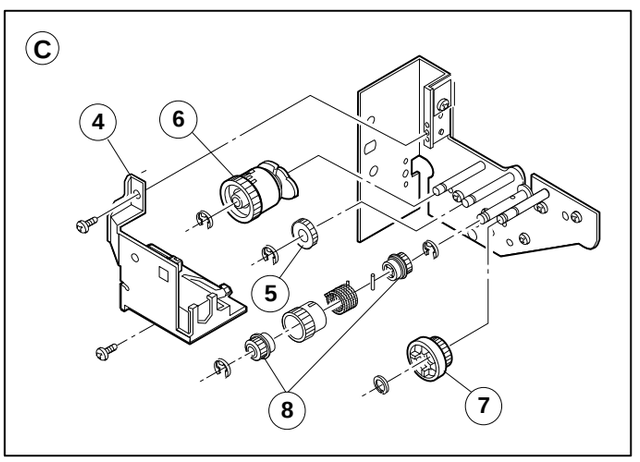
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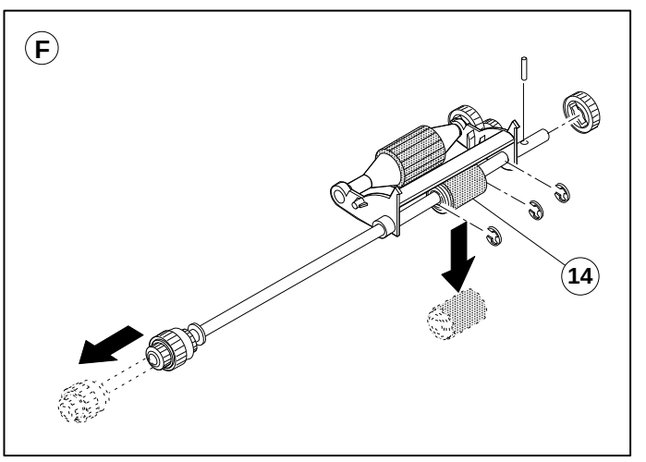
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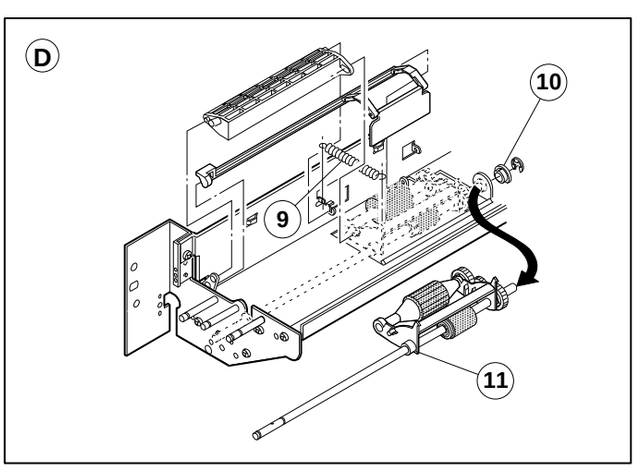
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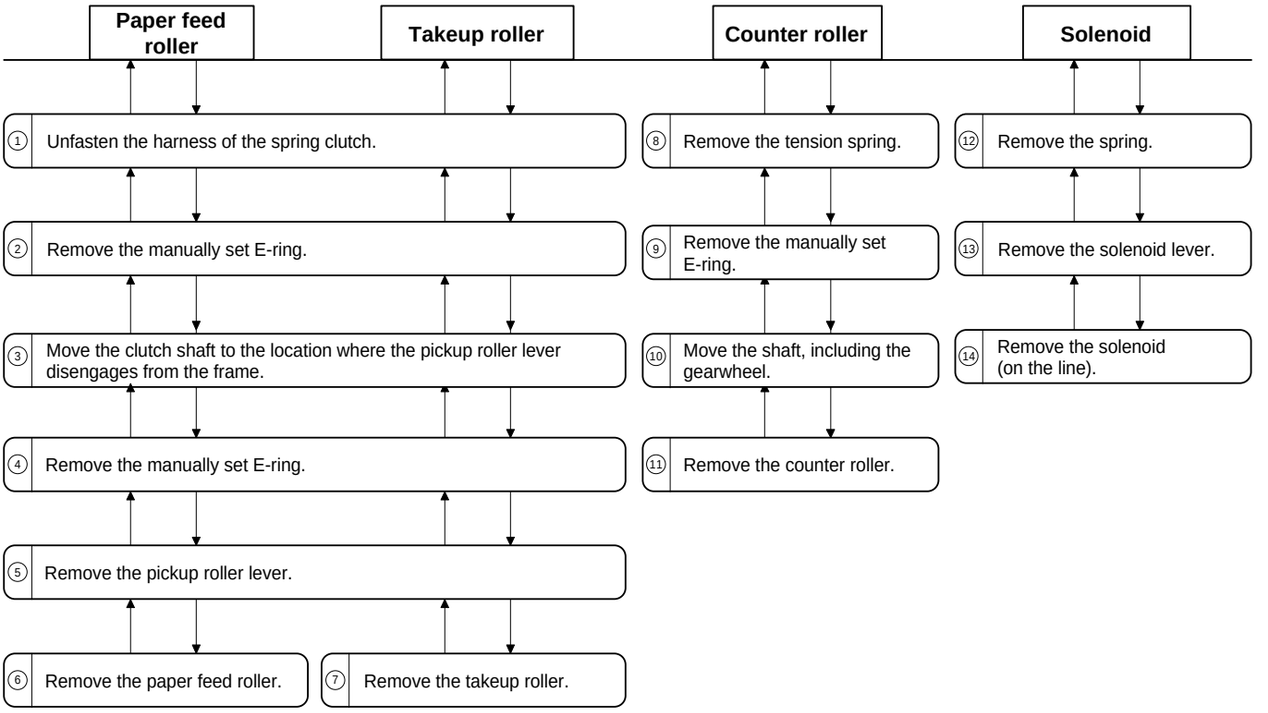
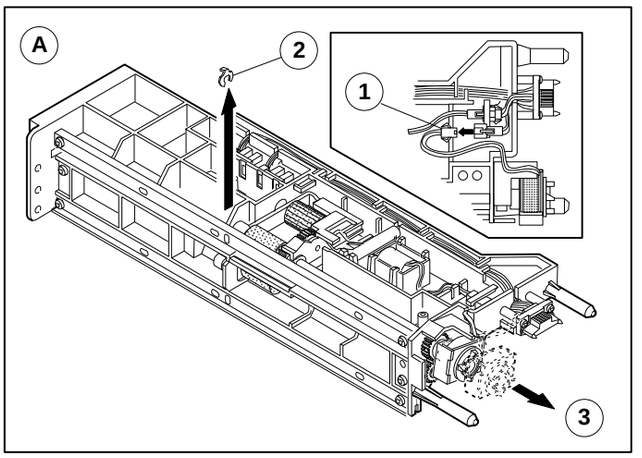
3. Paper feed unit


Paper feed roller
Takeup roller
Counter roller
Solenoid
① Unfasten the harness of the spring clutch.
② Remove the manually set E-ring.
③ Move the clutch shaft to the location where the pickup roller lever disengages from the frame.
④ Remove the manually set E-ring.
⑤ Remove the pickup roller lever.
⑥ Remove the paper feed roller.
⑦ Remove the takeup roller.
⑧ Remove the tension spring.
⑨ Remove the manually set E-ring.
⑩ Move the shaft, including the gearwheel.
⑪ Remove the counter roller.
⑫ Remove the spring.
⑬ Remove the solenoid lever.
⑭ Remove the solenoid (on the line).

NOTE: The one-way clutch is on the rear frame side (clutch side).

NOTE: The side with a protrusion is on the rear side.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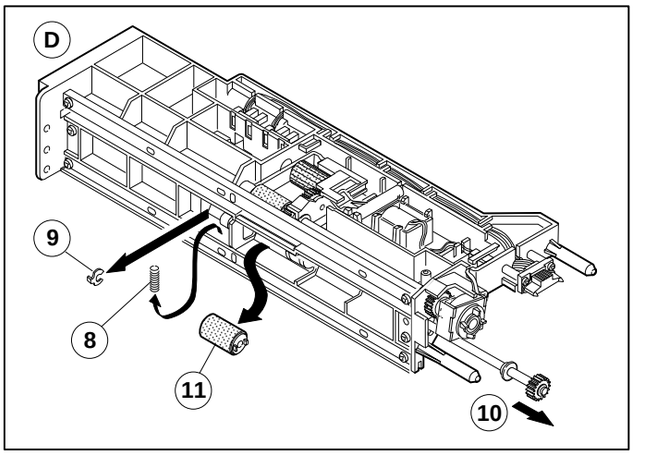
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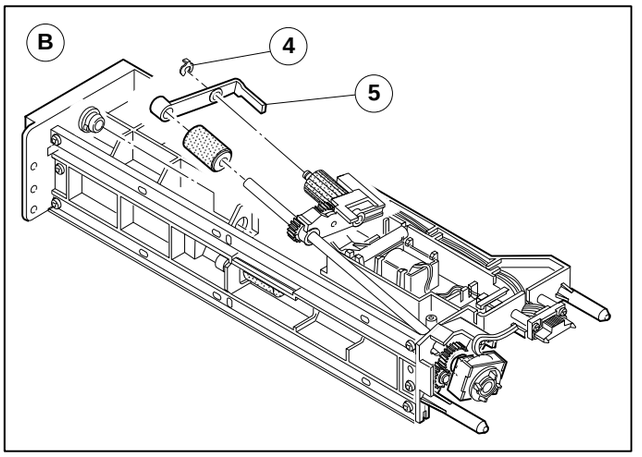
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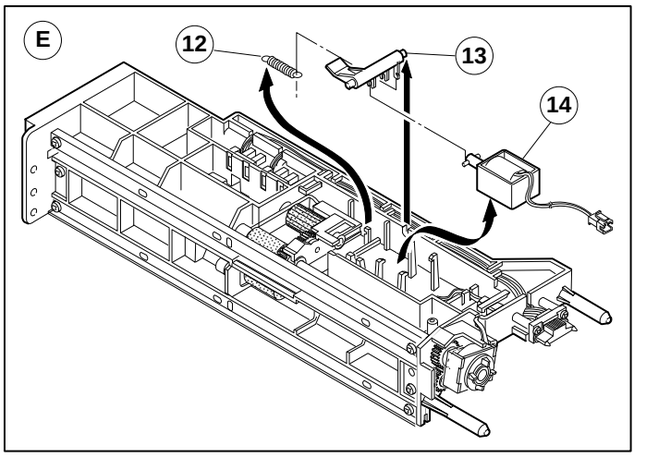
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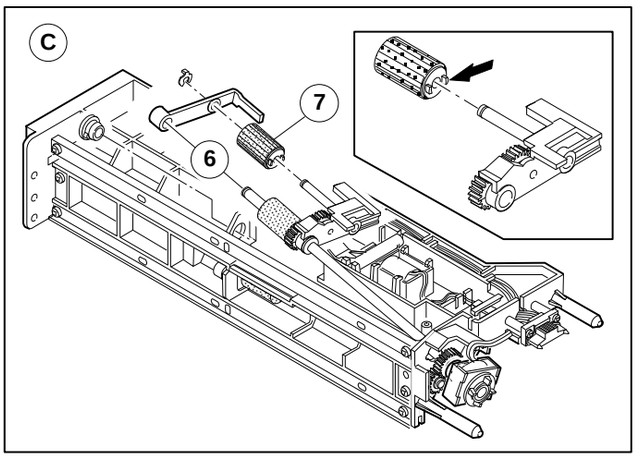
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4. Transport baseplate unit

Suction unit transfer belt | **Paper stop roller** | **Paper stop clutch**

① Remove the transport baseplate from the machine (4 screw on front, 2 on rear, 2 connectors).

② Pull the paper entry side rolle towards the paper exit side, then remove it.

③ Move the suction transfer belt to the front side, then remove it.

NOTE: Note the arrowhead that shown on the suction unit transfer belt.

④ Remove the DV guide (6 screws).

⑤ Remove the spring and the auxiliary roller.

⑥ Remove the paper stop clutch (1 screw, and loosen 1 setscrew).

⑦ Remove the front side gearwheel (one each of E-ring, pin, washer, spring).

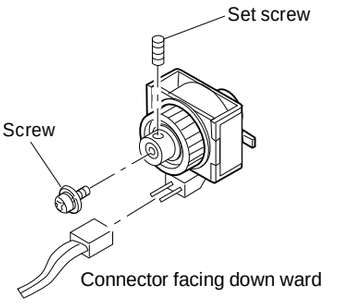
⑧ Remove the bearing (one each on front and rear).

⑨ Remove the paper stop roller.

⑩ Remove the connecting plate ⑤ in Fig. Ⓕ. (2 screws)

⑪ Remove the stopper and the 22T gear.

⑫ Remove the P.S clutch



NOTE: H specificafions mode remove the demoisture heater lamp in the suction section. (Remove heater connector ⓑ in Fig. Ⓑ.)

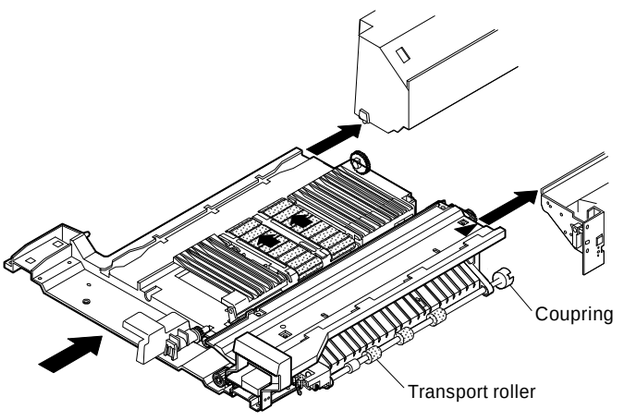
Suction lift lever

Loosen screw ⓐ in Fig. Ⓐ and shift the suction lift lever to R side, and the heater unit will be remove

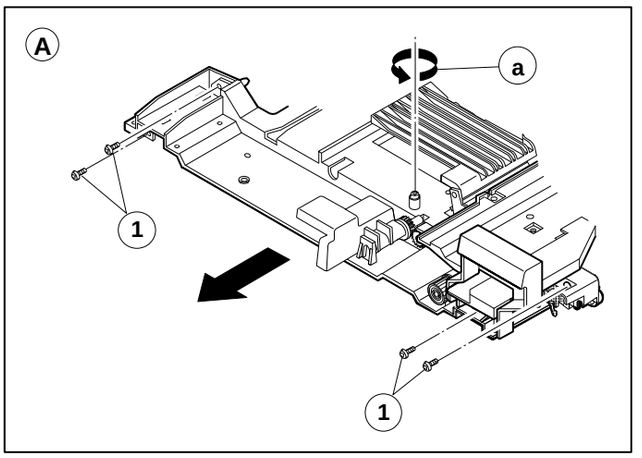
※ When removeing the transport plate unit, remove the DV tank, the front cabinet, the process unit, the upper cassette (ADU unit) in advance.
For removing the upper cassette, it is advisable to remove the paper feed unit in advance.
Since the fuser unit will serve as the guide rail for removing and assembling the transport bace plate, do not remove it.
Open the right cabinet.

※ When installing the transport base plate unit

① Fit the arrow mark in the DV guide with the groove in the left side of the rail transport base plate in the malti paper feed section of the main body and the mark in the fusing unit cover.



② Securely engage the transport roller coupring with the main body coupring. If not, the unit cannot be inserted to the end.
Check that the roller can be turned manually. (If the couprings are not securely engaged, the roller cannot be turned manually.)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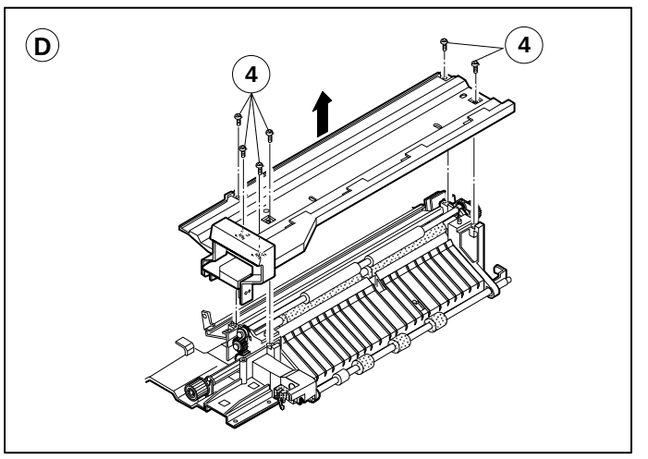
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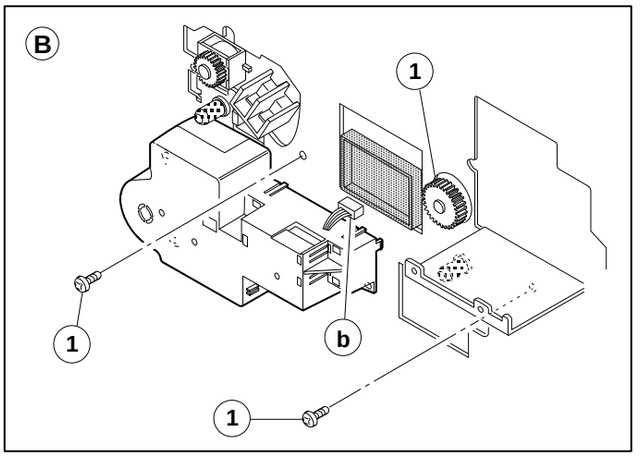
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b
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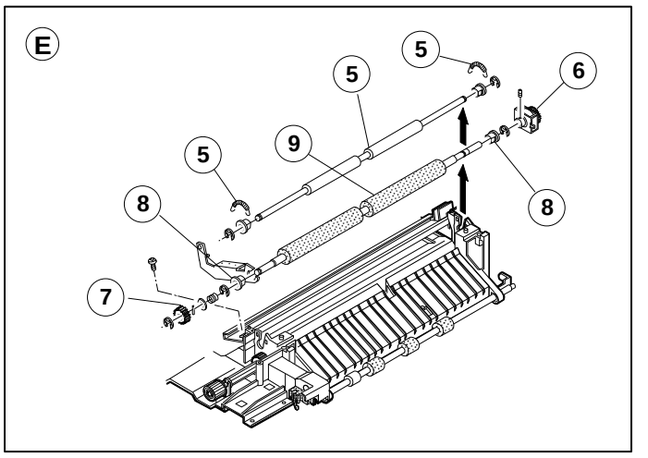
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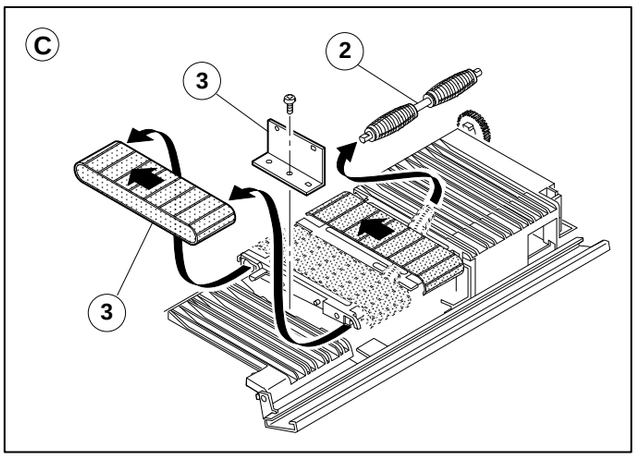
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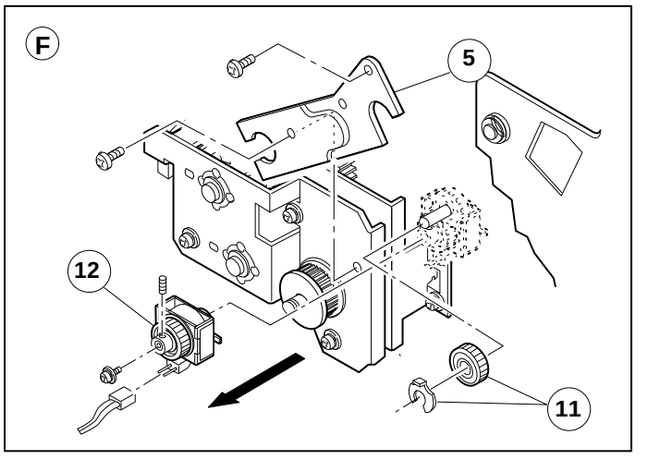
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5. Fuser unit

Heater lamp | **Upper/lower heat roller** | **Upper/lower separation pawls** | **Cleaning roller**

① Remove the fuser cover (2 screws).

② Unfasten the heater lamp connectors on both sides.

③ Unfasten the thermistor and thermostat connectors.

④ Remove the lamp holder unit (2 screws).

⑤ Remove the heater lamp.

⑭ Remove the front side copy lamp spring.

NOTE:
Make sure if the spring is well held.

⑮ Remove the rear side copy lamp holing plate.

⑯ Remove the copy lamp front bushing and move it to rear.

⑰ Remove the cleaning roller.

⑥ Remove the tension spring and release the fuser tension.

NOTE: When the clam shell is assembled, the periphery of the mechanism must meet together.

⑦ Remove the clam shell mechanism holding screws (2 screws).

NOTE:
Do not use the spare screw hole.

⑧ Open the fuser unit.

⑨ Remove the upper heat roller assy.

⑫ Remove the upper separation pawls.

(Thermistor)

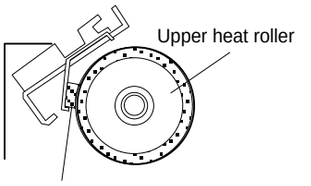
- The center of the thermistor must in contact with the heat roller.
- Clean away alien object on the thermistor surface using alcohol.

⑩ Open the lower pawl holder bracket assy (2 screws).

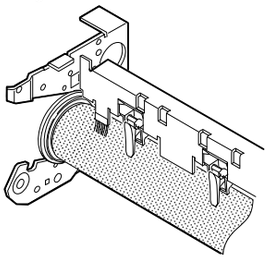
NOTE: When installing the lower heat roller, the pawl must be put onto the place before closing the lower pawl holding plate, then restore it after closed.

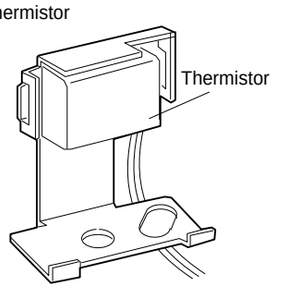
⑪ Remove the lower heat roller assy.

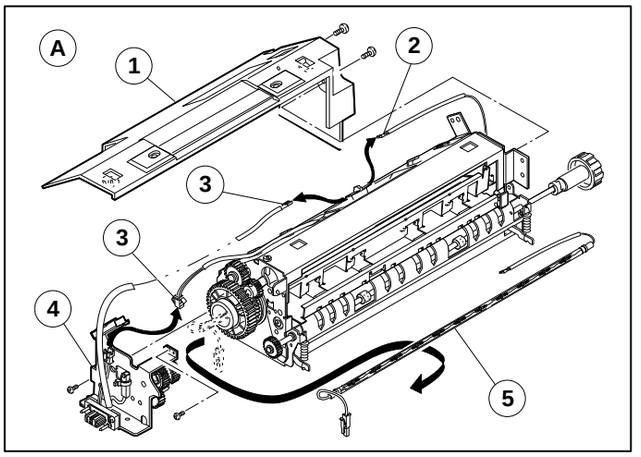
⑬ Remove the lower separation pawls.



Discharge brush
The discharge brush must in contact with the upper heat roller.



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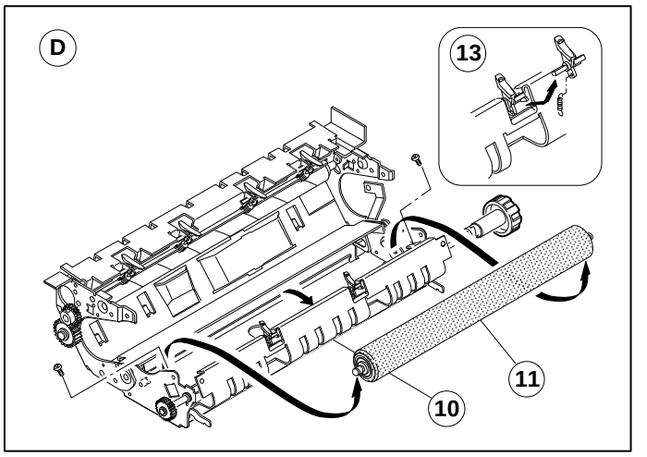
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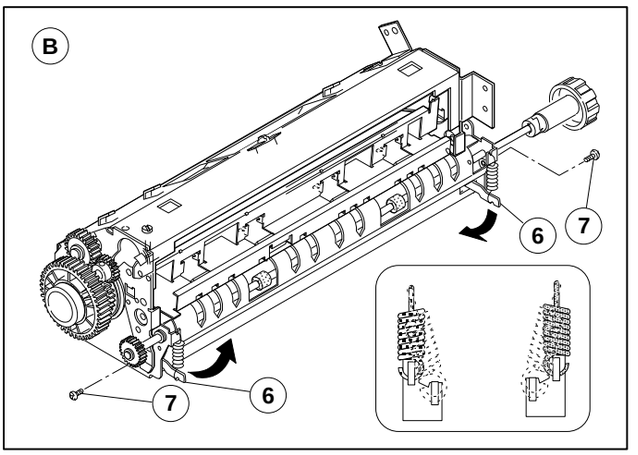
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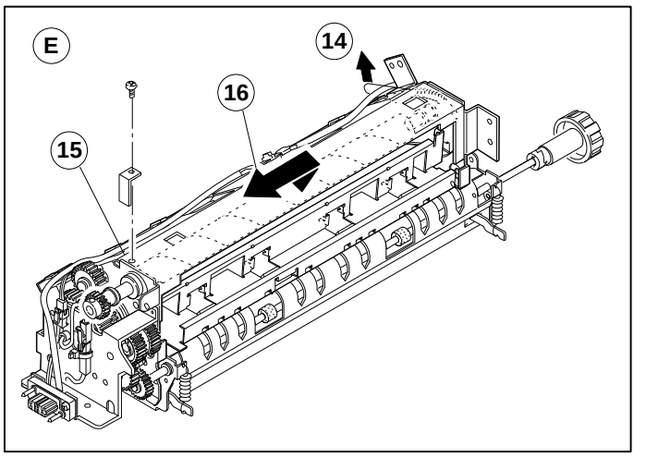
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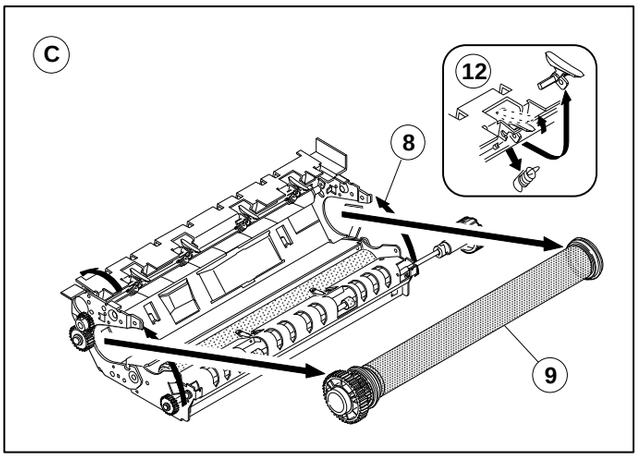
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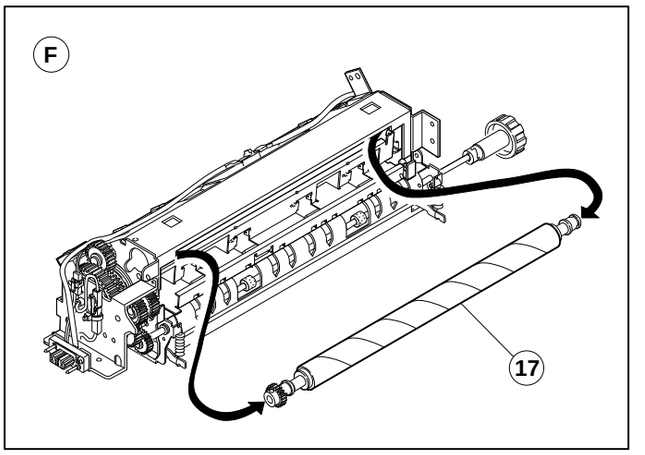
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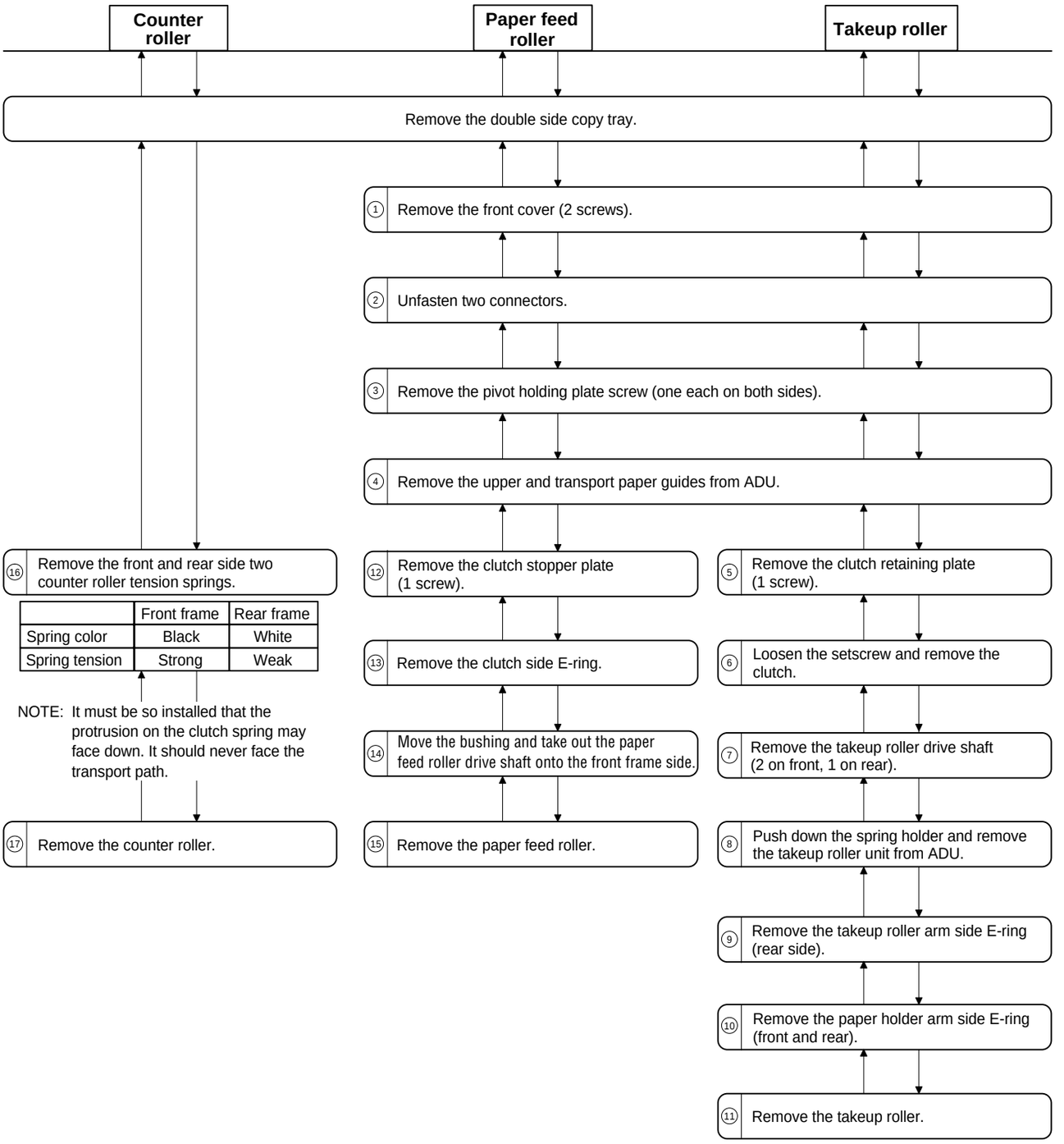
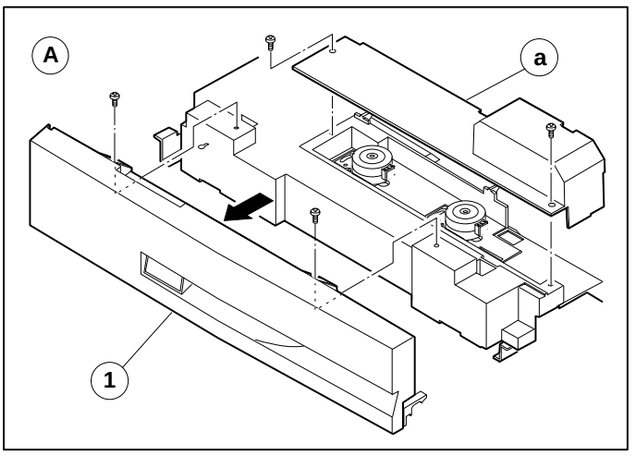
6. Duplex copy unit


Counter roller
Paper feed roller
Takeup roller
Remove the double side copy tray.
1 Remove the front cover (2 screws).
2 Unfasten two connectors.
3 Remove the pivot holding plate screw (one each on both sides).
4 Remove the upper and transport paper guides from ADU.
16 Remove the front and rear side two counter roller tension springs.
Front frame
Rear frame
Spring color
Black
White
Spring tension
Strong
Weak
NOTE: It must be so installed that the protrusion on the clutch spring may face down. It should never face the transport path.
17 Remove the counter roller.
12 Remove the clutch stopper plate (1 screw).
13 Remove the clutch side E-ring.
14 Move the bushing and take out the paper feed roller drive shaft onto the front frame side.
15 Remove the paper feed roller.
5 Remove the clutch retaining plate (1 screw).
6 Loosen the setscrew and remove the clutch.
7 Remove the takeup roller drive shaft (2 on front, 1 on rear).
8 Push down the spring holder and remove the takeup roller unit from ADU.
9 Remove the takeup roller arm side E-ring (rear side).
10 Remove the paper holder arm side E-ring (front and rear).
11 Remove the takeup roller.


A
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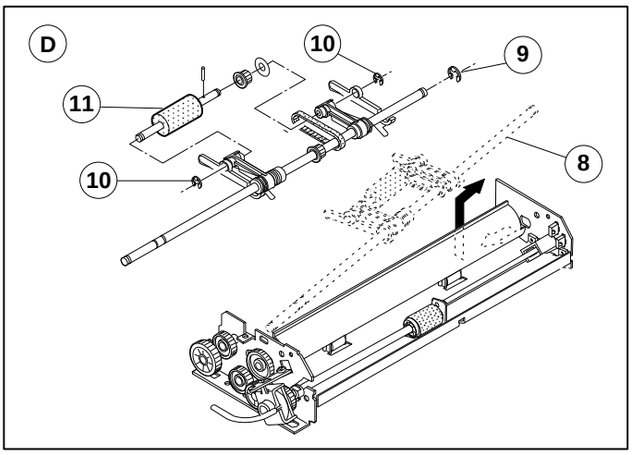
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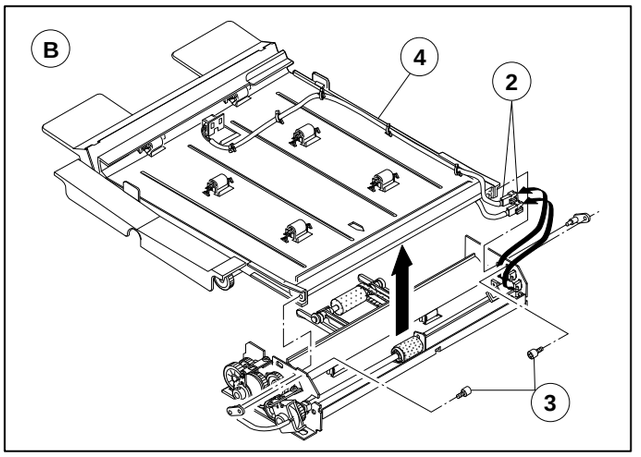
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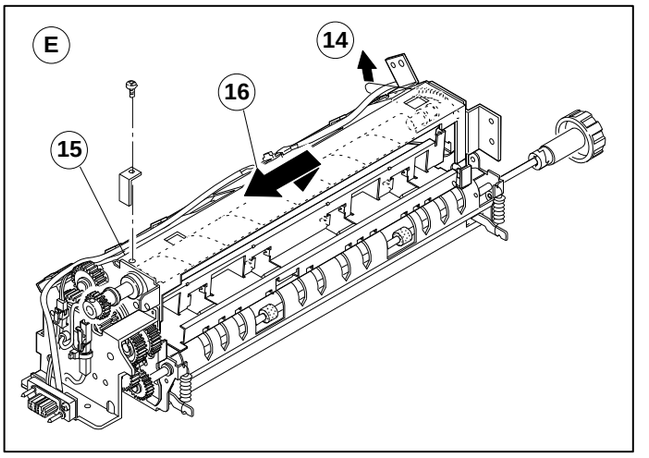
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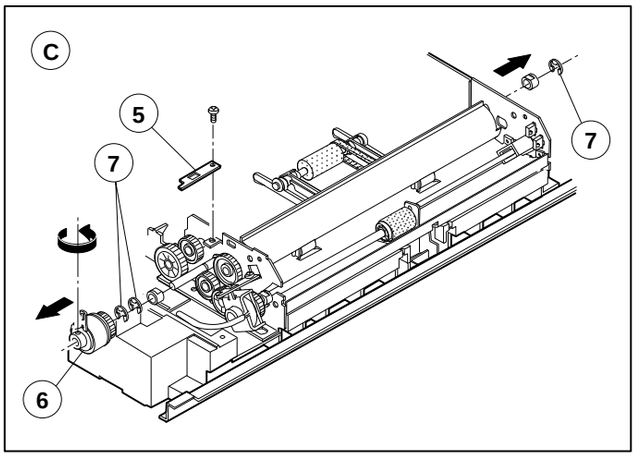
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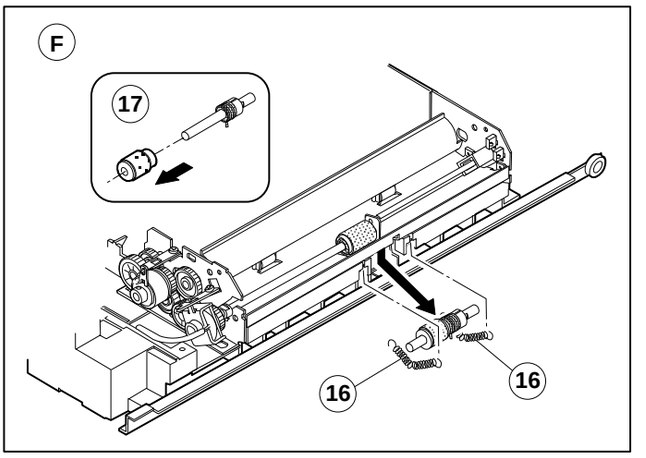
F
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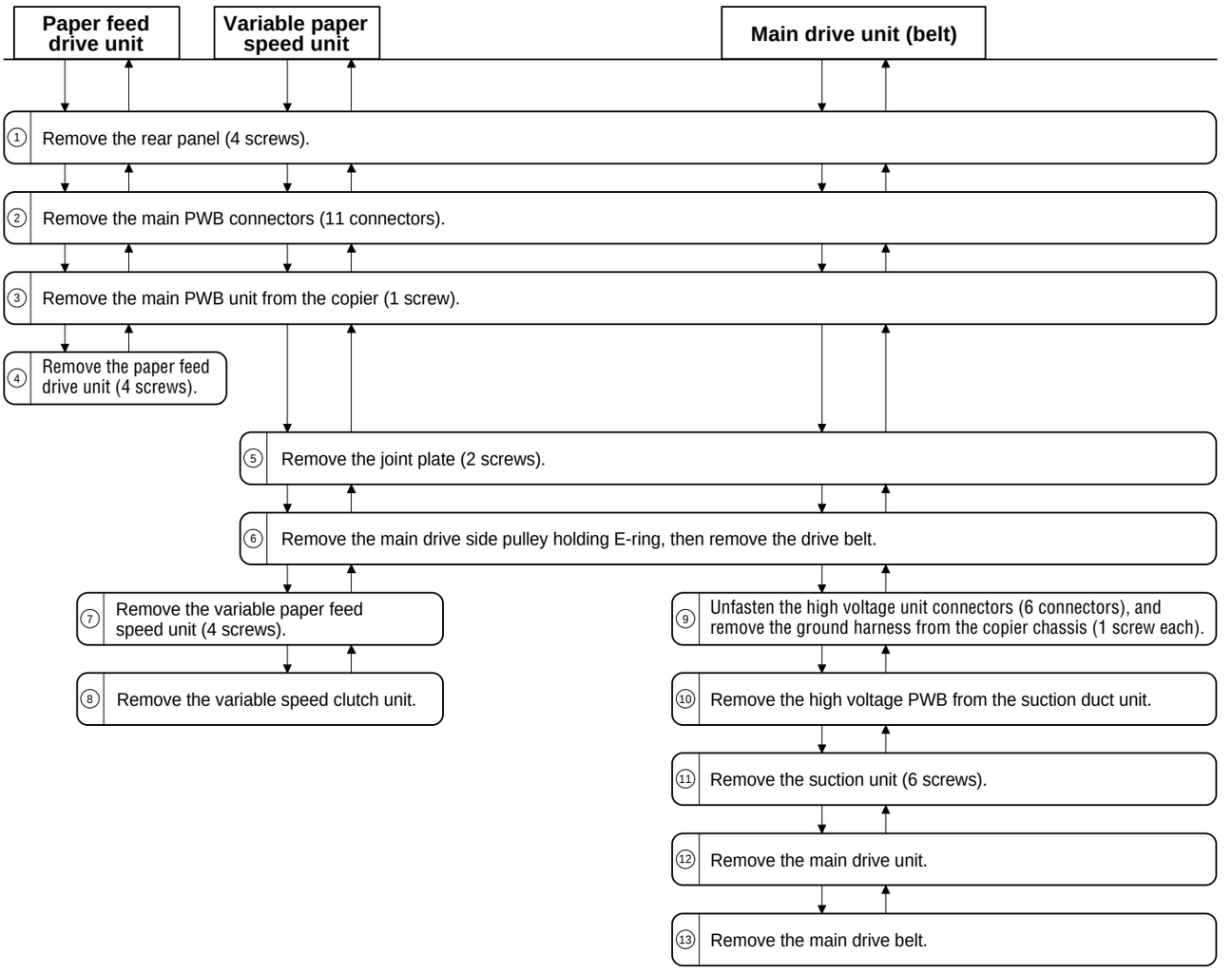
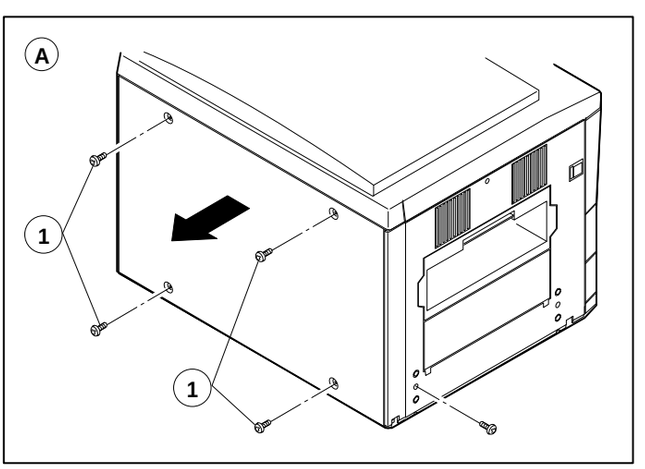
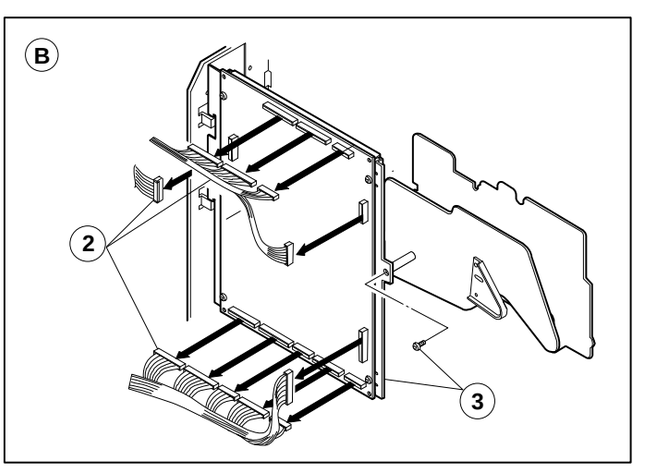
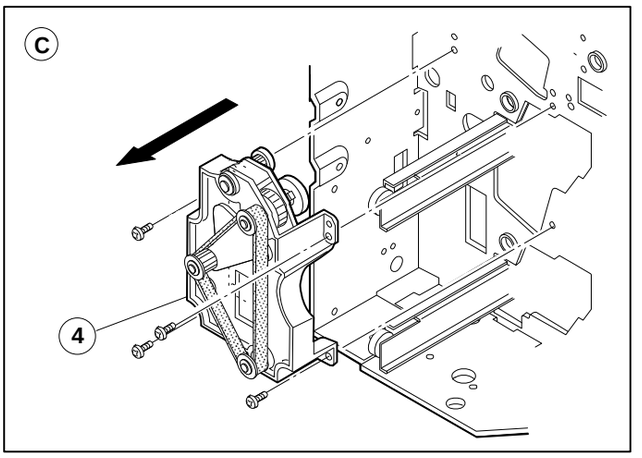
7. Rear frame side major components


Paper feed drive unit
Variable paper speed unit
Main drive unit (belt)
1 Remove the rear panel (4 screws).
2 Remove the main PWB connectors (11 connectors).
3 Remove the main PWB unit from the copier (1 screw).
4 Remove the paper feed drive unit (4 screws).
5 Remove the joint plate (2 screws).
6 Remove the main drive side pulley holding E-ring, then remove the drive belt.
7 Remove the variable paper feed speed unit (4 screws).
8 Remove the variable speed clutch unit.
9 Unfasten the high voltage unit connectors (6 connectors), and remove the ground harness from the copier chassis (1 screw each).
10 Remove the high voltage PWB from the suction duct unit.
11 Remove the suction unit (6 screws).
12 Remove the main drive unit.
13 Remove the main drive belt.



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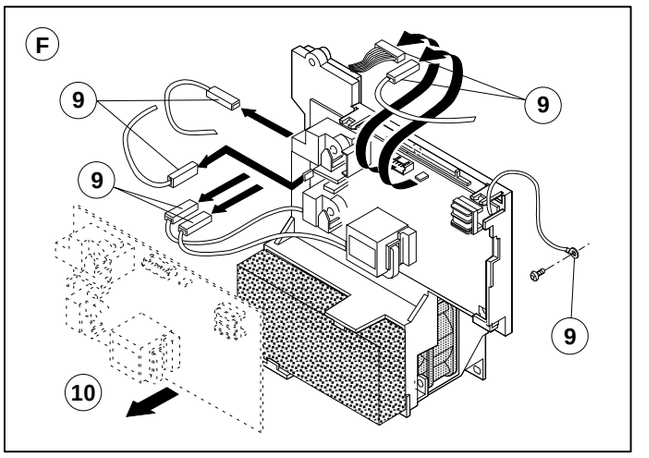
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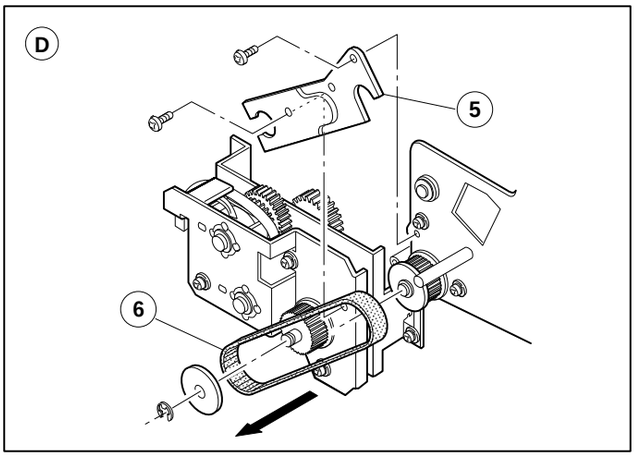
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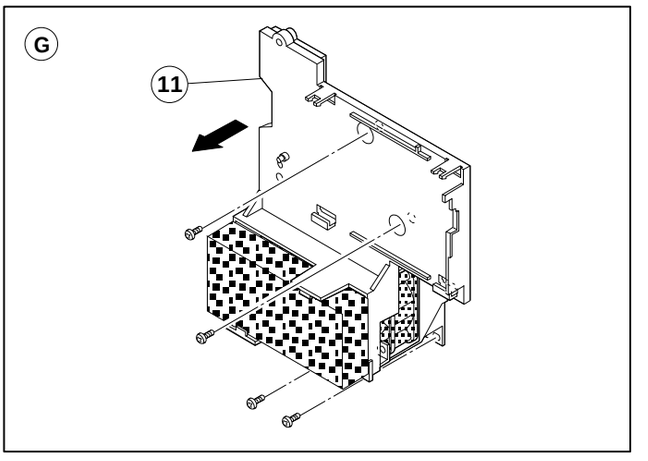
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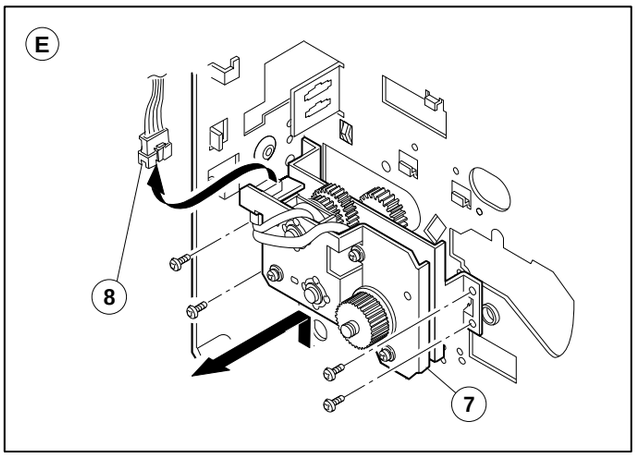
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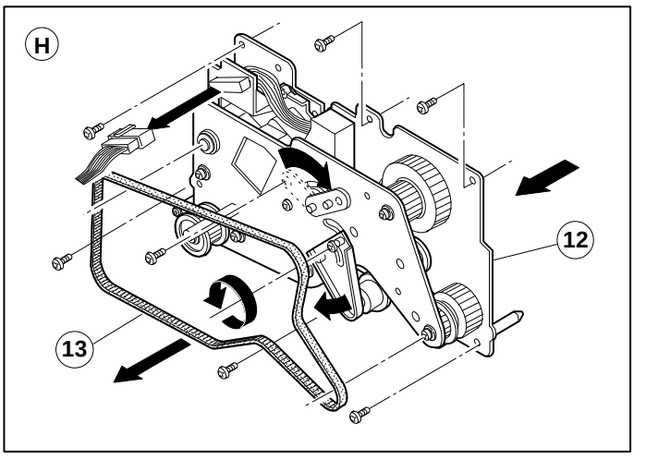
H
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AC power supply PWB | **DC power supply PWB** | **Paper exit gate solenoid**

① Remove the rear panel of the copier (4 screws).

② Remove the rear side screw of the left side panel (1 screw).

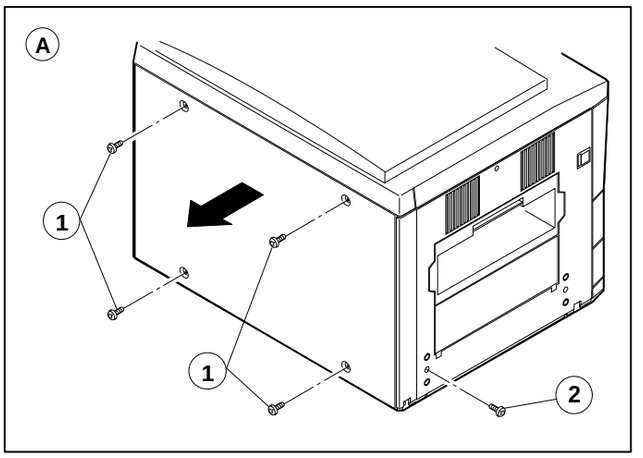
③ Remove the AC power supply board (5 screws, 6 connectors).

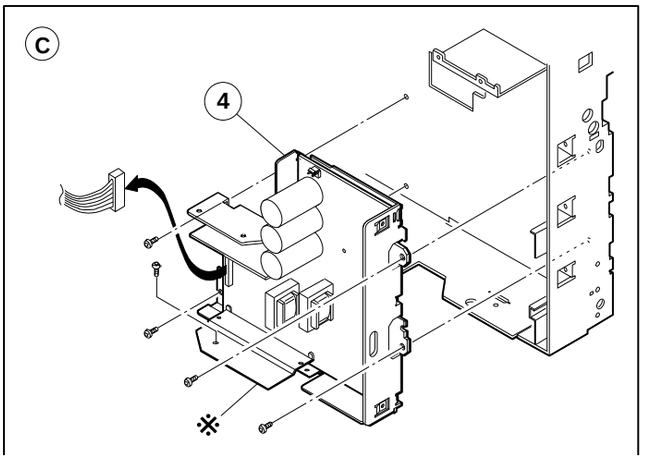
④ Remove the DC power supply PWB (5 screws, 1 connector).

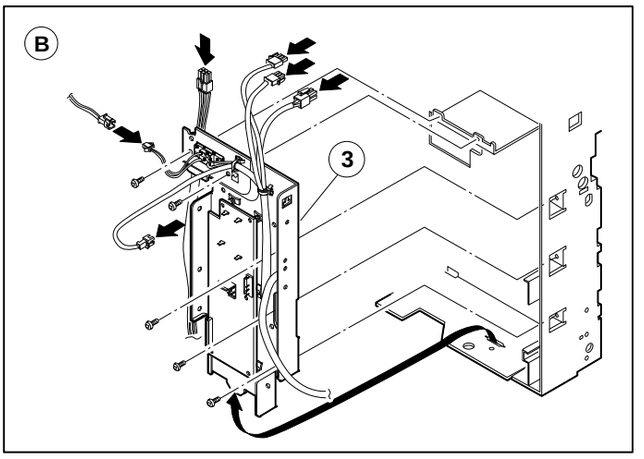
※ DC power PWB identification

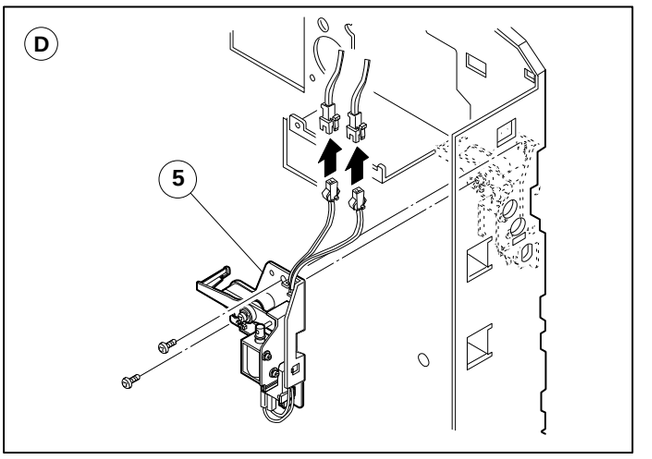
100V system	200V system
White label	Red label

⑤ Remove the paper exit gate solenoid (2 screws, 2 connectors).

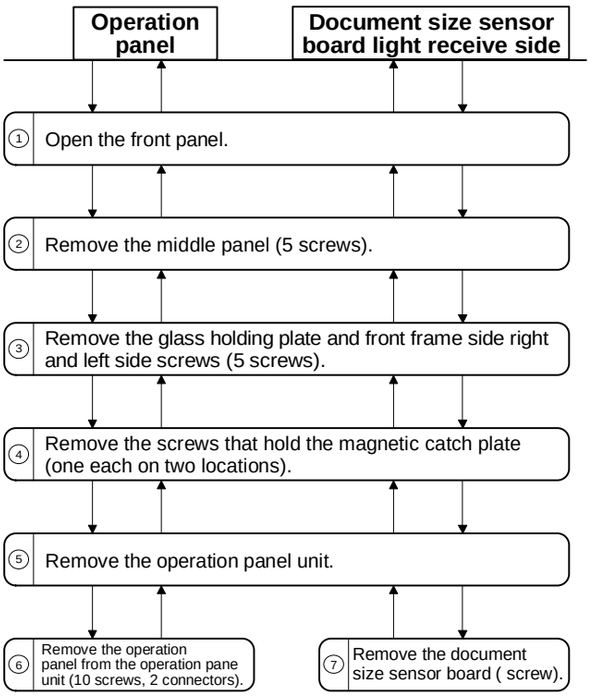




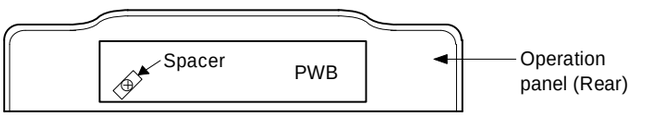


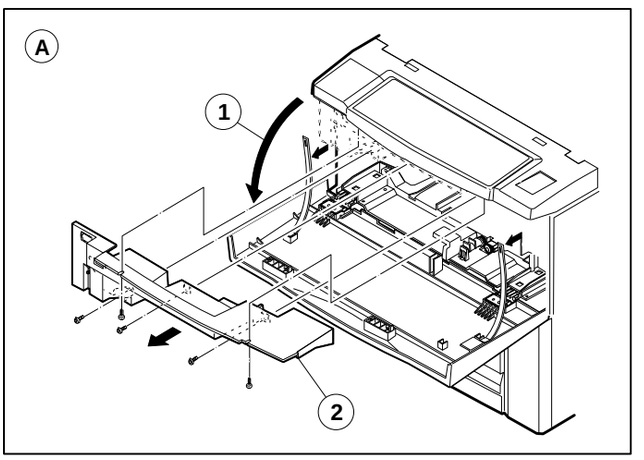


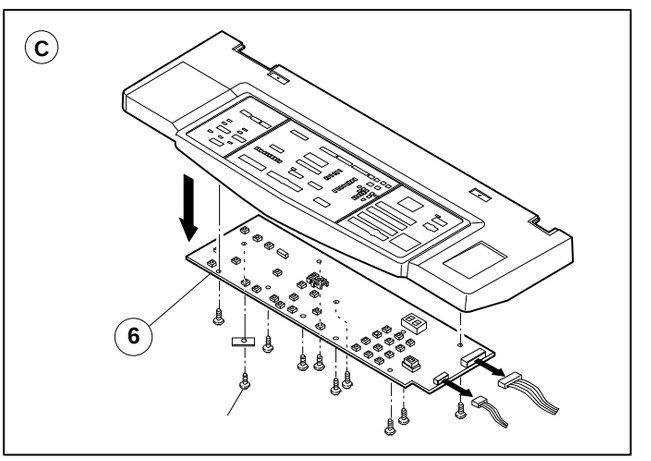
8. Operation panel unit and document size sensor board (light receive side)

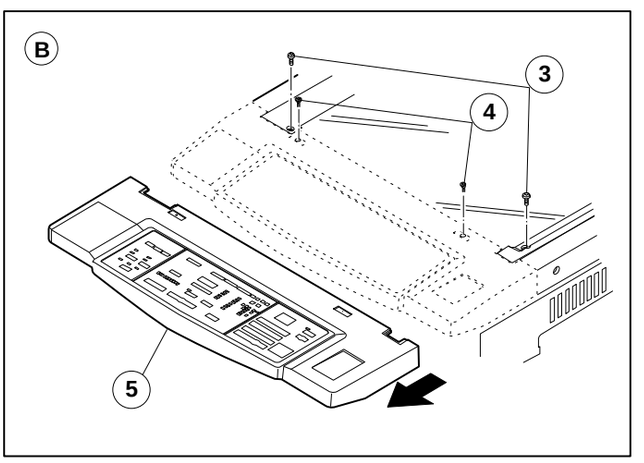

Operation panel
Document size sensor board light receive side
① Open the front panel.
② Remove the middle panel (5 screws).
③ Remove the glass holding plate and front frame side right and left side screws (5 screws).
④ Remove the screws that hold the magnetic catch plate (one each on two locations).
⑤ Remove the operation panel unit.
⑥ Remove the operation panel from the operation pane unit (10 screws, 2 connectors).
⑦ Remove the document size sensor board (screw).

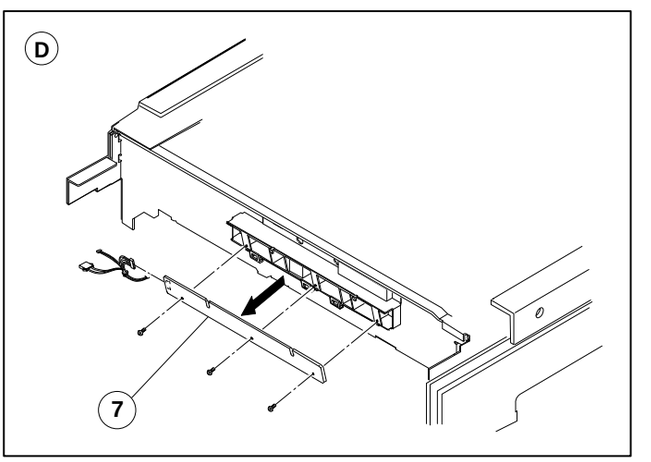
Note: Tighten the PWB screw to fix the operation panel (Left) spacer.











9. Optical unit

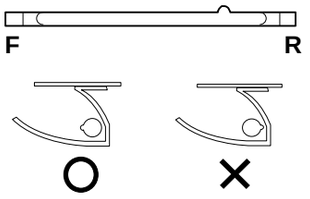
Copy lamp	Copy lamp unit	#2/3 mirror base unit	#4/5 mirror base unit

① Remove the original guides (L, R) and remove the table glass (two each screws).

② Move the copy lamp unit to the cut in the rear of the top cabinet and remove the rear frame side copy lamp electrode holding screw.

③ Remove the copy lamp.

NOTE: Note the direction of the copy lamp.



It must be installed with the bulge of the copy lamp near the rear side, as shown in the figure.

④ Remove the operation panel.
Remove the top cabinet, left.
Remove the left cabinet.

⑤ Remove the upper dark box cover (screw).

⑥ Remove the wire holding plates found on both frame sides of the copy lamp unit, then remove wires from the side plates (F, R).

⑦ Rotate the copy lamp unit to remove.

⑧ Remove the mirror base wire from the #2/3 mirror base unit.

⑨ Move the #2/3 mirror base unit to the square hole (a) on the front side of the optical baseplate, then rotate it to remove.

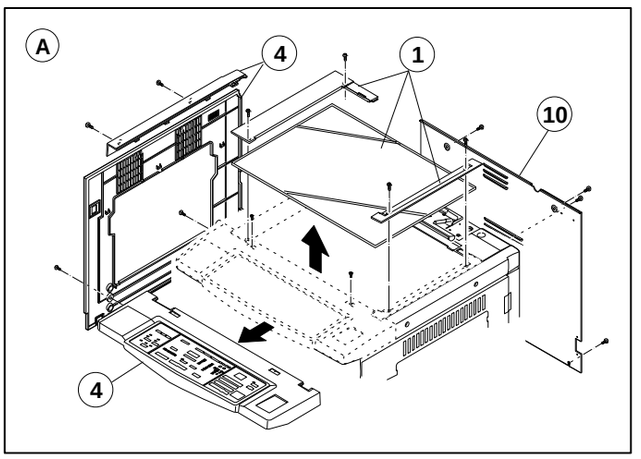
⑩ Remove the rear panel (4 screw).

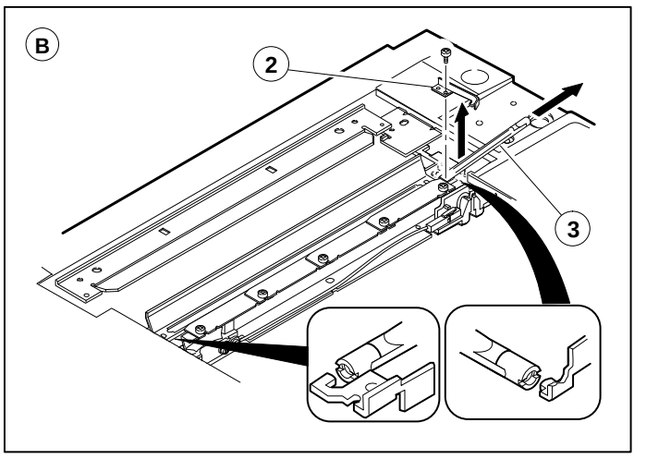
⑪ Measure the size of "P."

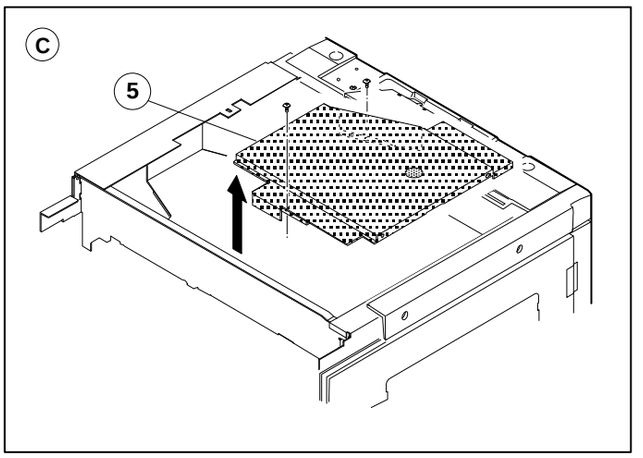
⑫ Remove the #4/5 mirror motor holding bracket (6 screw).

⑬ Remove the optical harness connectors.
Remove the lens motor connectors.
Remove the lens home position sensor connector.
Unfasten the document sensor light receive board connector. Remove the front cabinet switch junction harness.

⑭ Remove the mirror base unit together with the #4/5 mirror motor holding bracket assy.



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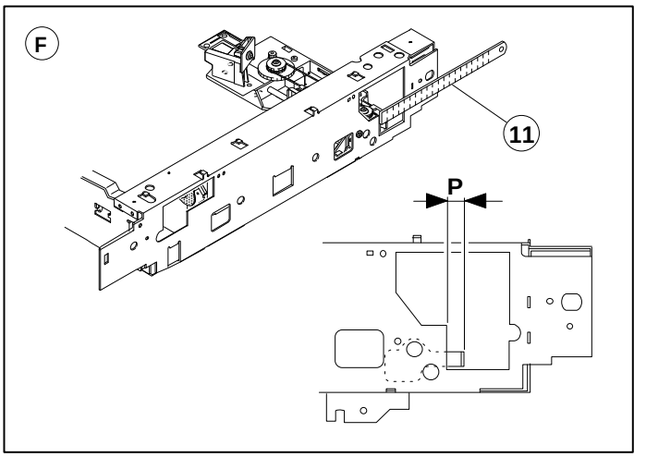
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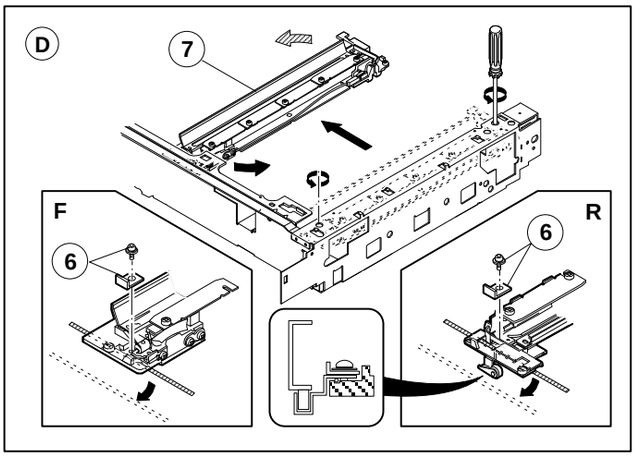
P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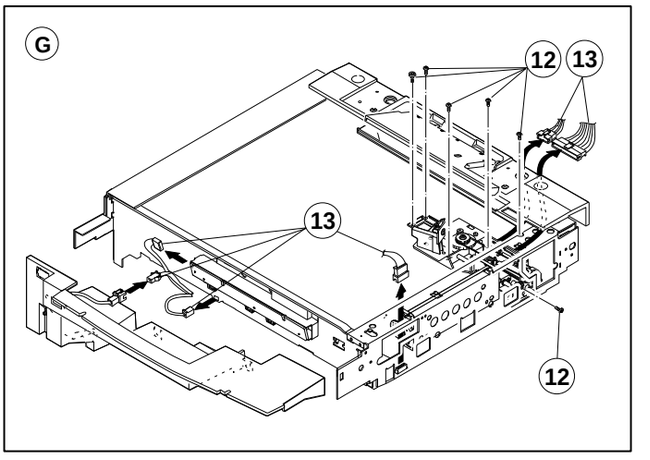
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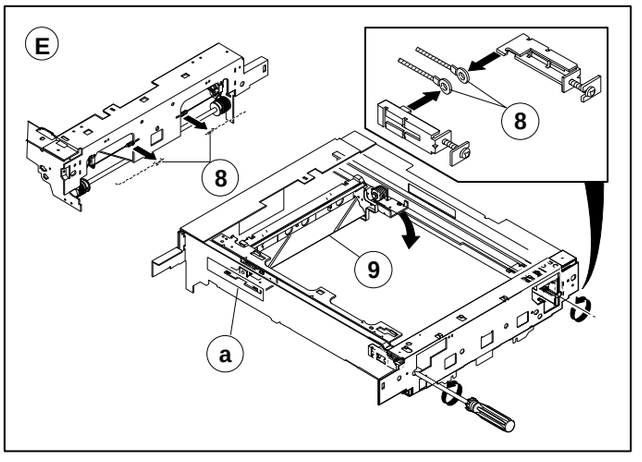
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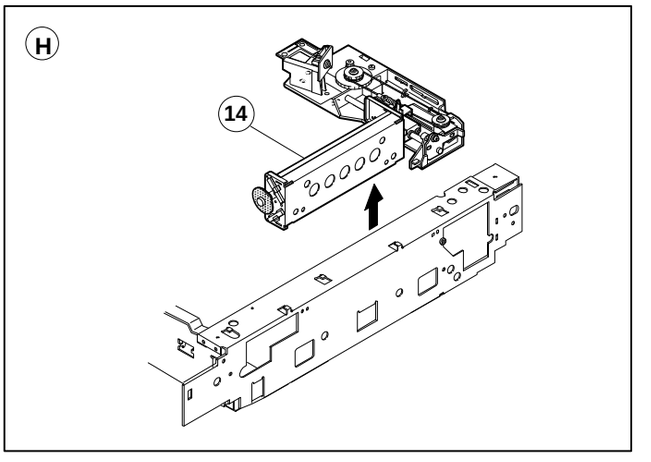

H
14

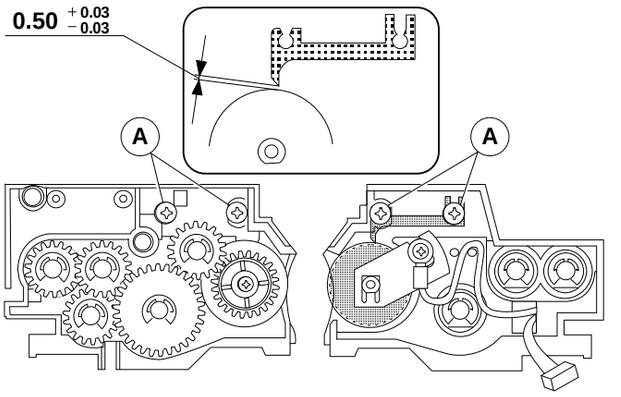
[7] ADJUSTMENTS

1. Developing Unit

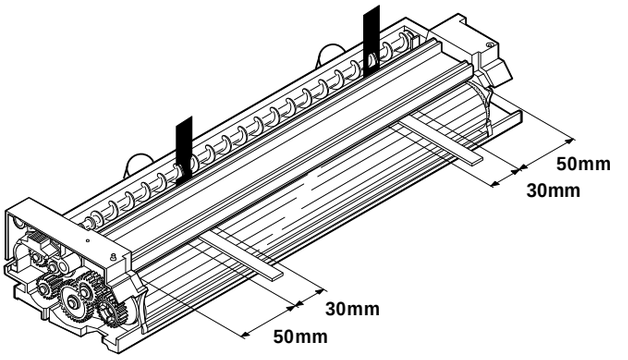
(1) Clearance Adjustment of Developing Doctor Blade

1 Remove 4 screws and the 5-pin connector which connect the developer tank to the toner hopper, and pull out the developer tank.
2 Loosen 4 setscrews A of the developing doctor blade.
(2 setscrews on the rear frame side and 2 on the front frame side).
3 Insert the 0.50mm-feeler gauges into the clearance between the developing doctor blade and the magnet roller at the points 50-80 mm away from their both ends.

Tool: UKOGM0075CSZZ (Feeler gauge)

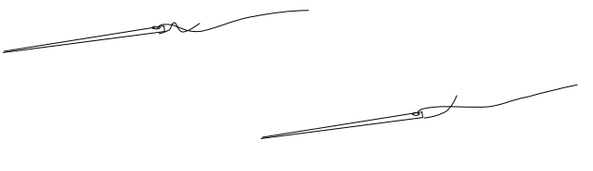


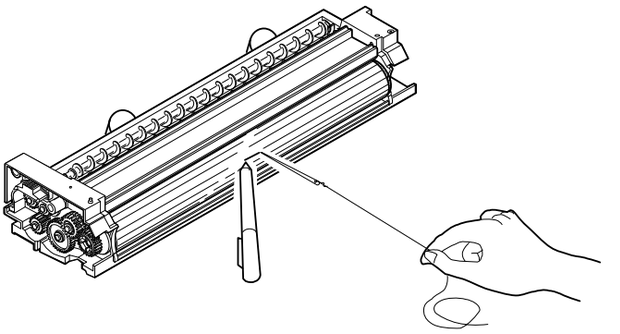
4 While pressing down the developing doctor in the arrow direction, tighten the 4 setscrews to secure the developing doctor.
5 Check that the clearance between the developing doctor and the magnet roller is $0.50^{+0.03}_{-0.03}$mm at the points 50-80 mm away from the doctor ends.
Caution: Do not damage the developing doctor blade and the magnet roller during insertion of the feeler gauge.

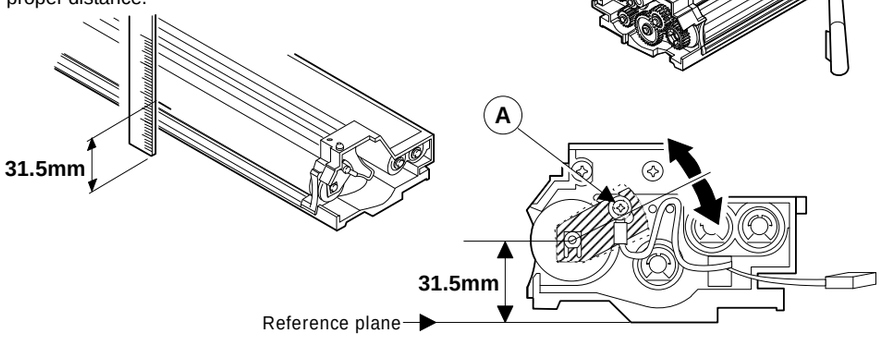


(2) Position Adjustment of Developing Magnet Roller Main Pole

1 Remove 4 screws and the 5-pin connector which connect the developer tank to the toner hopper, pull out the developer tank and put it on a flate surface.
2 Thread a needle or pin as shown in the figure on the right.
3 While holding the thread, bring the needle near the magnet roller. (Do not use a clip because it will not provide an accurate position of the main pole).
4 Use a pen to put a mark on the point of the magnet roller surface to which the needle is attracted.
5 Measure the distance from the mark to the reference plane on which the developer tank is placed.
This distance must be 31.5 mm.
If not so, loosen setscrews A of the main pole adjusting plate and move the adjusting plate in the arrow direction to obtain the proper distance.



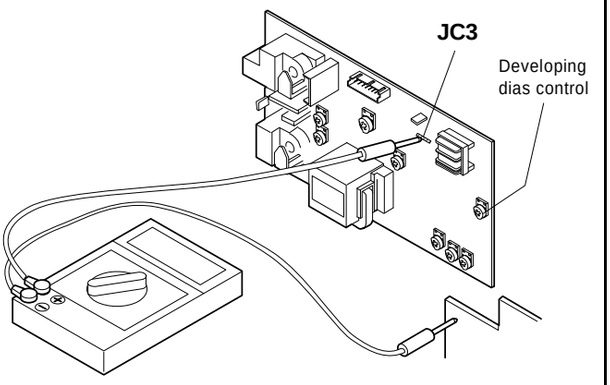




(3) Developing Bias Adjustment

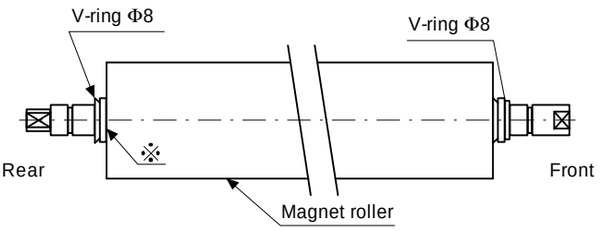
1 Set the measuring range of the digital multimeter to 300 Vdc or more.
2 Apply the probes to the developing bias output check pin and the chassis(GND) of the high voltage unit.
3 Perform Simulation 8-1. (The developing bias voltage is output for 30 seconds.
4 Adjust the developing bias control for –215 Vdc output voltage.

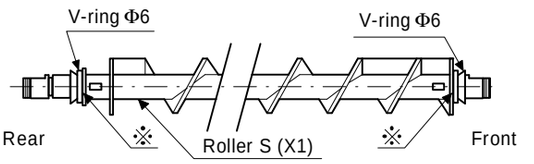
Tool: UKOGE0043CS01 (Digital multimeter)

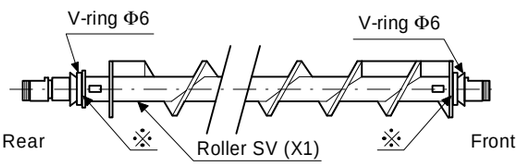


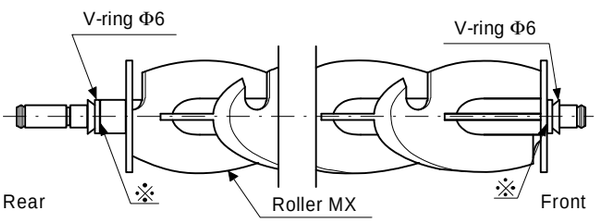
(4) Notes on installing various rollers of the developing unit

(1) V-rings must be attached in the correct direction.
(2) No gap must exist at ❋ between the V-ring and the roller.
(3) When attaching ϕ8-ring PRNGP0013FCZZ, ϕ8-ring PRNGP0022FCZZ and ϕ6-ring PRNGP0015FCZZ to the developing magnet roller,
  1) the direction of the V-ring must be as shown in the upper figure, and
  2) no gap must exist at ❋ between the V-ring and the roller.



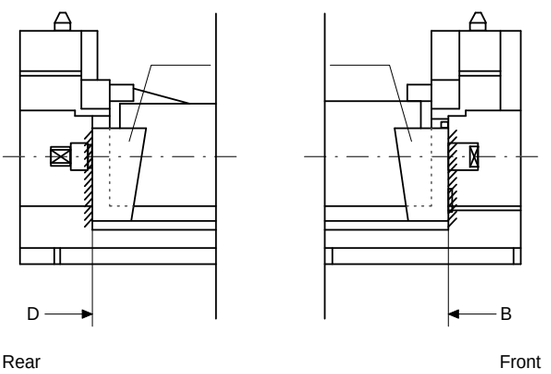


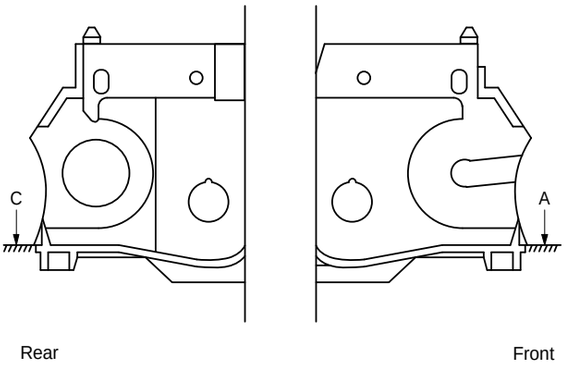




(5) Notes on applying the developing side seals (front and rear)

(1) The side seal must be applied on the surface free of oil, grease and foreign matter.
(2) The side seal must be securely attached to prevent it from coming off.

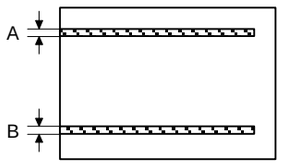




2. Processing Unit

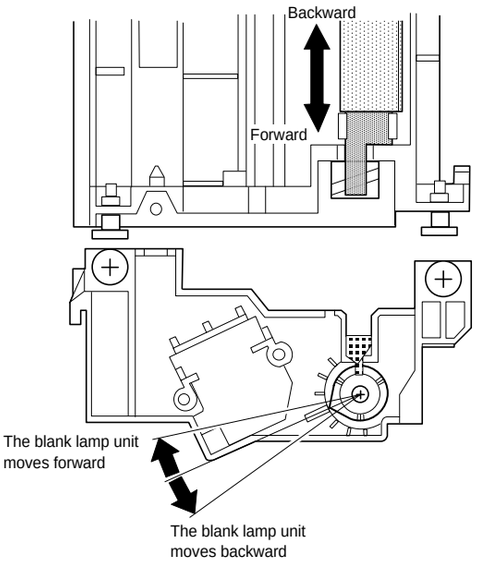
(1) Adjustment of Blank Lamp Position

1 Check that the center deviation is 2.0mm or less. (If the center deviation is more than 2.0 mm, correct it).
2 Set an A3(11x17)-size blank original on the original table, and with the original cover opened, make a reduced (x 0.64) copy using an A3 (11 x 17) paper.
3 Measure the width of solid areas. If the width is more than 1 mm, adjust the blank lamp unit position so that the width of the solid areas is 1 mm or less.



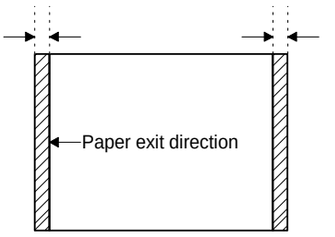
IA-BI≦1mm

1 notch of the adjusting cam : lamp movement 0.5 mm
Half notch of the adjusting cam : lamp movement 0.25 mm



(2) Adjustment of Solid Width of Both Ends

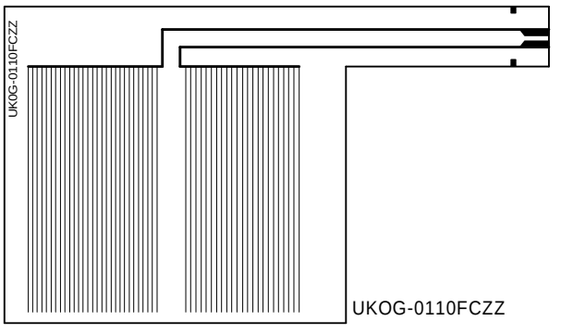
1 Perform Simulation 51-05.
The ready lamp goes on and the copy quantity indicator shows a preset value. Now you can use ten keys to input a value ranging from "1" to "19". Turning on the print switch after value input causes the value to be stored in memory and the ready lamp to go off. Input value of 1 provides approx. 1.0 mm reduction of the solid width. The factory-set value is 6.



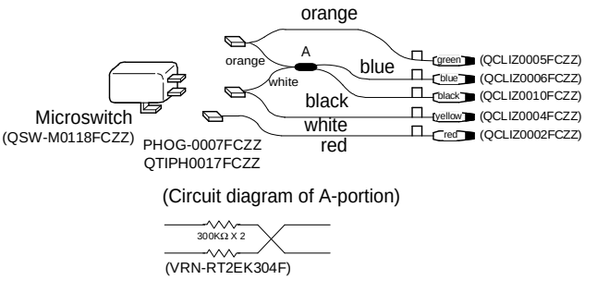
(3) Adjustment of High-Voltage Output Balance

A. Applying the Special Measuring Tool

Electrode sheet (UKOG-0110FCZZ)



Electrode sheet harness (DHAI-0304FCZZ)

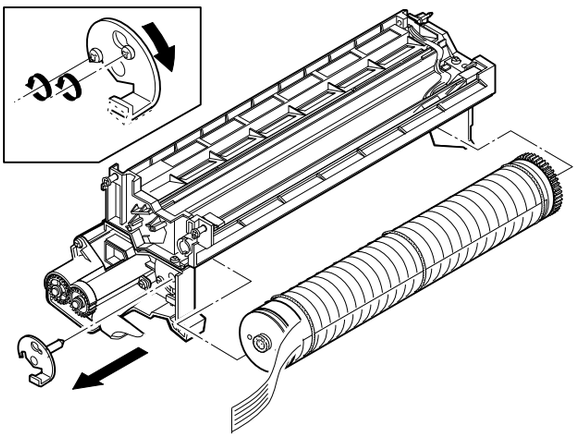


(Circuit diagram of A-portion)

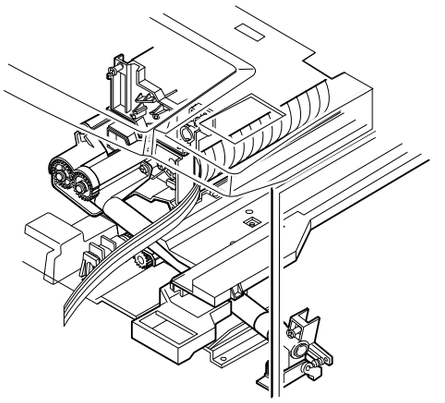
Digital multimeter (or ampere meter)
Note: use a multimeter with measuring range of 0 to 100 μA and error of ±1% or less.

B. Adjusting the Transfer Charger Current

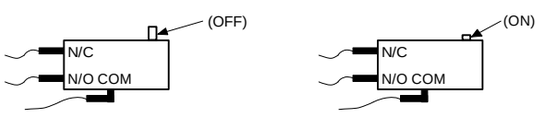
1 Remove the developing unit, transfer/separation charger unit, main charger unit and waste toner bottle from the machine.
2 Remove the processing unit from the machine.
When removing (attaching) the processing unit, do not grasp the toner feed pipe.
3 Remove the photoreceptor drum from the processing unit and mount the electrode sheet on the drum using adhesive tape.
4 Install the photoreceptor drum into the processing unit and attach the processing unit to the machine.
5 Attach the drum holder unit to the machine in the manner which allows drawing the lead of the electrode sheet from the developer tank side.



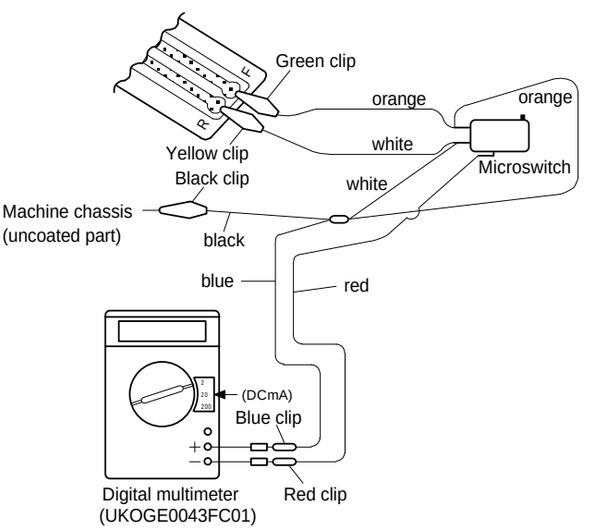
6 After cleaning the transfer charger wire, attach the transfer/separation charger unit to the machine. (Do not attach the main charger unit).



7 Connect the electrode sheet to the digital multimeter (or an ampere meter).
Manually turn on the door switch.
8 Measure the drum current on the sides of front and rear frame. The difference in current between the front and rear frame must be 8.0 μA or less.
   a. Turn on the main switch and perform Simulation "8-06". (THVG will be ON for approx. 30 seconds)
   b. Measure the drum current on the front and rear frame side.
      - If the microswitch is OFF, the drum current on the side of front frame is indicated.
      - If the microswitch if ON, the drum current on the side of rear frame is indicated.



   c. Check that the difference in current between both sides is 8.0 μA or less. If the difference is more than 8 μA, replace the charger unit.
9 Adjust the THVG output voltage:
   a. Turn on the main switch and perform Simulation "8-06". (THVG will be ON for approx. 30 seconds)
   b. Use the THVG output control to adjust the THVG output voltage until it becomes –31±5 μA.

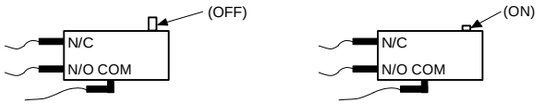


Note: Make sure the black clip is grounded at the machine chassis.
When using UKOGE0043CS01:
Control 1: set to DCmA
Control 2: set to 2
Red clip : connected to ⊕
Blue clip: connected to $
When using a d.c. ampere meter:
Red clip : connected to $ of d.c. ampere meter
Blue clip: connected to ⊕ of d.c. ampere meter

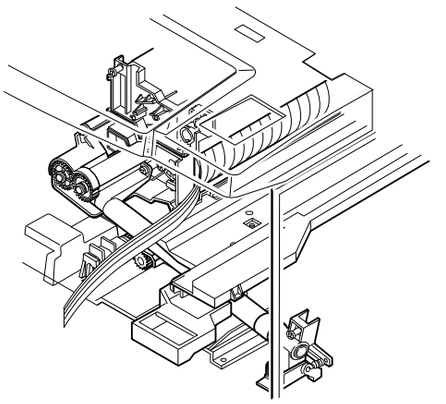
C. Checking the Electrostatic Main Charger Current

The drum current difference(balance) between the sides of front and rear frame is checked.

1 Perform steps (3)-B-1 to 5 .
2 Clean the saw-tooth plate of the main charger and attach the main charger to the machine.
(Do not attach the transfer/separation charger).
Manually turn on the door switch.
3 Measure the drum current on the sides of front and rear frame. The difference in current between the front and rear frame must be 8.0 μA or less.
a. Turn on the main switch and perform Simulation "8-02".
(MGVG will be ON for approx. 30 seconds.)
b. Measure the drum current on the front and rear frame side.
- If the microswitch is OFF, the drum current on the side of front frame is indicated.
- If the microswitch if ON, the drum current on the side of rear frame is indicated.



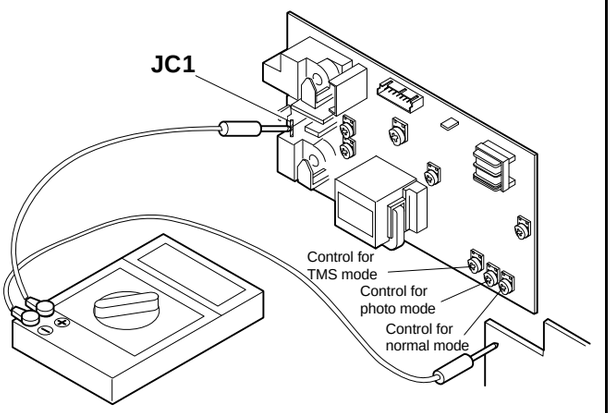
c. Check that the difference in current between both sides is 8.0 μA or less. If the difference is more than 8 μA, replace the charger unit.

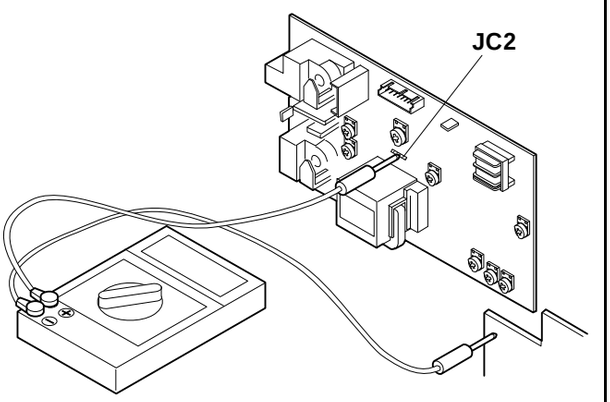


D. Adjusting the Electrostatic Main Charger Grid Voltage

1 Turn off machine. Attach the developing unit and the drum holder unit to the machine.
(Do not use the electrode sheet).
2 Attach the main charger unit to the machine. The machine should have all the charger units installed.
3 Remove the rear cover.
4 Connect the digital multimeter to the grid voltage check pin(JC1).
5 Set the measuring range of the digital multimeter to DCV.
(Use the digital multimeter with measuring range of up to 1000 Vdc).
6 Turn on the front cover switch manually.
7 Turn on the main switch, and adjust the output adjusting control so that output voltage values in Simulation "8-02"(normal mode), "8-03"(photo mode) and "8-04"(TSM mode) are as follows:

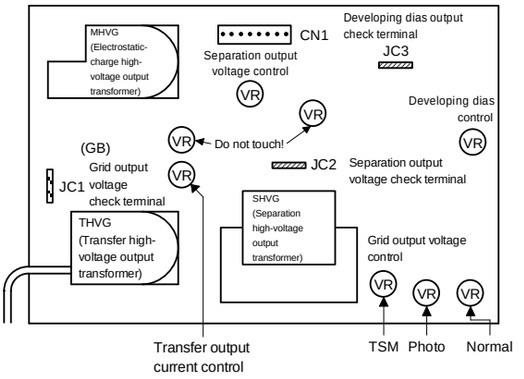
TEST POINT JC.1	Output Voltage
Normal mode	–730±15 Vdc
Photo mode	–610±15 Vdc
TMS mode	–490±15 Vdc





E. Adjusting the Separation Charger Output

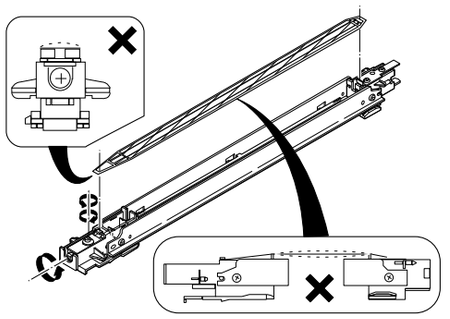
1 Attach the developing unit and the drum holder unit to the machine and turn on the machine.
(Do not use the electrode sheet).
2 Attach the separation charger unit and drum holder unit to the machine. The machine should have all the charger units installed.
3 Remove the rear cover.
4 Connect the digital multimeter to the SHVG output check pin(JC2).
5 Set the measuring range of the digital multimeter to DCV.
6 Turn on the door switch manually.
7 Perform Simulation "8-07". (The SHVG will goes on for approx. 30 min).
8 During the simulation, adjust the SHVG output control so that the output monitoring voltage (bias) JC2 of the separation charger is 0±10 Vdc.



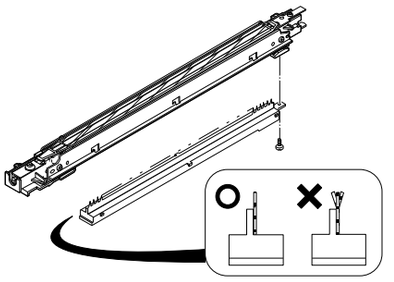
(4) Notes on maintenance for high-voltage units

A. Electrostatic Charger Unit

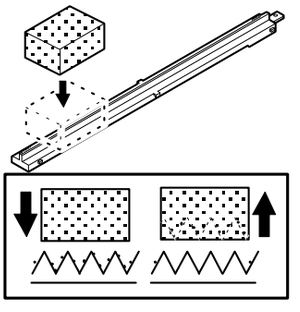
1 Do not distort nor stain the screen grid during handling. Be sure that the screen grid is secured in place.



2 The teeth of the saw-tooth assembly must be free of distortion.

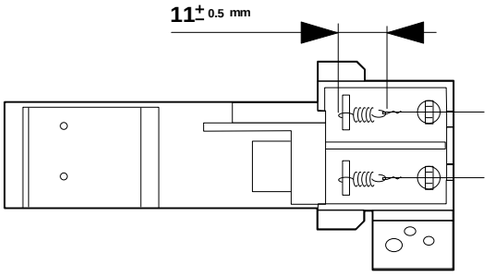


3 Do not touch the inside of the MC case(saw-tooth assembly side), the screen grid, and the saw-teeth.
4 The saw-teeth should be cleaned with foam polystyrene as shown in the figure.

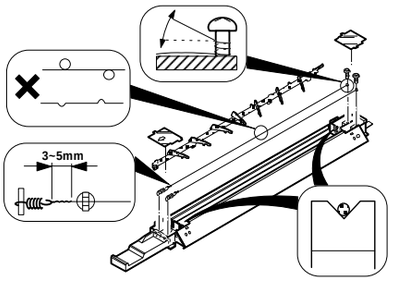


B. Transfer/Separation Charger Unit

1 The charger spring must be 11±0.5 mm in length.



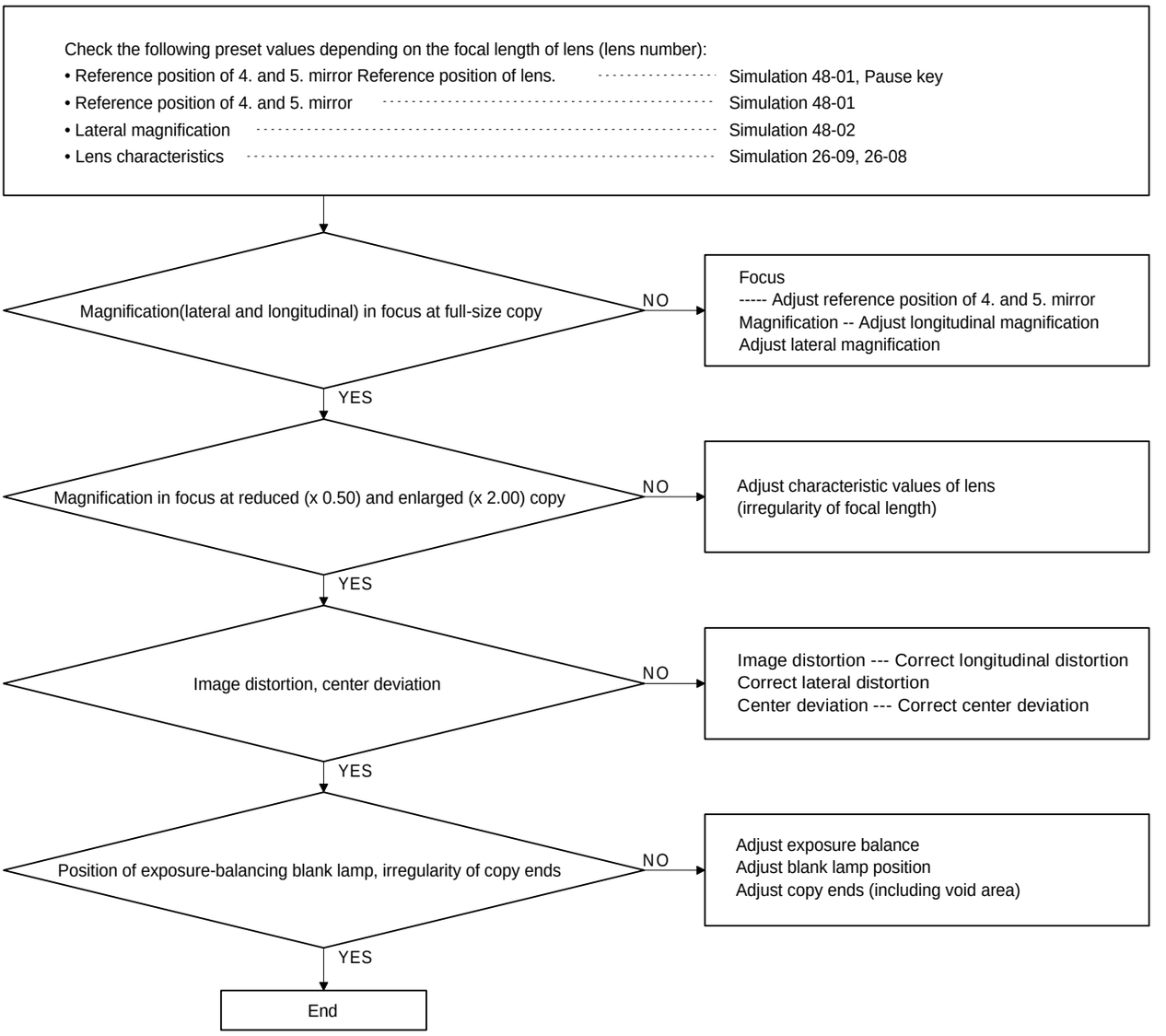
2 The charger wire must be free of distortion and fitted in the holder groove.



3 The charger case must be free of oil, grease and foreign matter.
4 The wire must be cleaned with alcohol.

3. Adjustment of Optical System

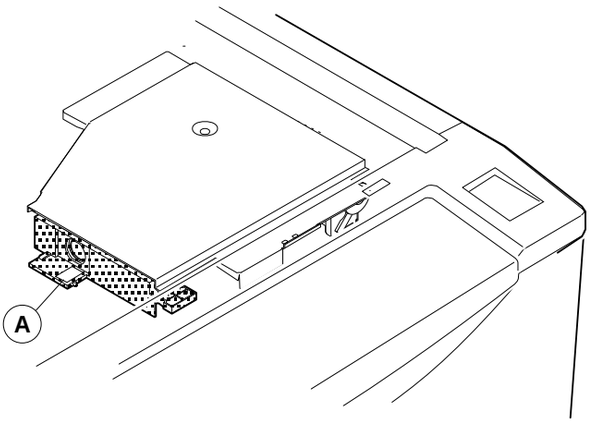
The optical system must be adjusted according to the following flowchart:


Check the following preset values depending on the focal length of lens (lens number):
• Reference position of 4. and 5. mirror Reference position of lens. ..... Simulation 48-01, Pause key
• Reference position of 4. and 5. mirror ..... Simulation 48-01
• Lateral magnification ..... Simulation 48-02
• Lens characteristics ..... Simulation 26-09, 26-08
Magnification(lateral and longitudinal) in focus at full-size copy
NO
Focus
----- Adjust reference position of 4. and 5. mirror
Magnification -- Adjust longitudinal magnification
Adjust lateral magnification
YES
Magnification in focus at reduced (x 0.50) and enlarged (x 2.00) copy
NO
Adjust characteristic values of lens
(irregularity of focal length)
YES
Image distortion, center deviation
NO
Image distortion --- Correct longitudinal distortion
Correct lateral distortion
Center deviation --- Correct center deviation
YES
Position of exposure-balancing blank lamp, irregularity of copy ends
NO
Adjust exposure balance
Adjust blank lamp position
Adjust copy ends (including void area)
YES
End

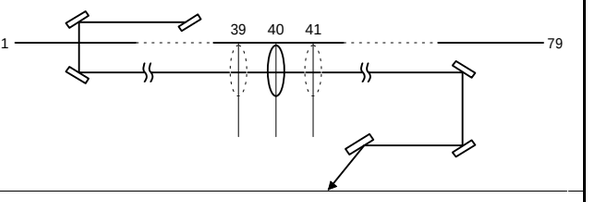
* The exposure balance, blank lamp position and copy ends can be separately adjusted. But items other than these must be adjusted according to the steps shown in the above flowchart.

(1) Adjusting the Reference Position of Lens

A reference value depending on lens characteristics must be input for adjusting the reference position of lens.
(This value determines the home position of lens).
(Procedure)
Perform Simulation 48-01 [=↵] .
[C] → [=↵] → [0] → [=↵] → [4] → [8] → [PSW] → [1] → [PSW] → [=↵] causes a preset value or "40" to → be shown on the copy quantity indicator.

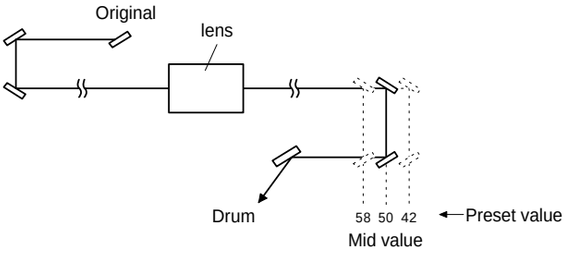


Substitute the value (irregularity of distance between original and lens ⇒ –3.9 to +3.9) on the label applied on A shown in the right figure, for "0-L" of the expression "O-L" is the value on label.
40 – [(0 – L) x 5] = reference value for correction
and type the result.
Eg.: If the result (reference value for correction) is 1.2 ;
40 – (1.2 x 5)= 34 value to be input



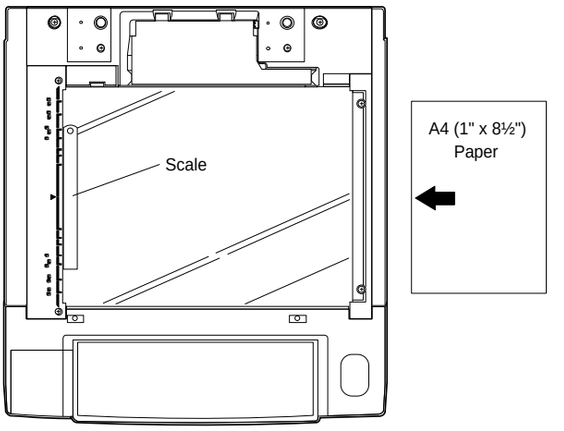
(2) Adjusting the Reference Position of 4. and 5. Mirror

A reference value corresponding on lens characteristics must be input also for adjusting the reference position of 4. and 5. mirror.
(This value determines the home position of 4. and 5. mirror base).
(Procedure)
Perform Simulation 48-01 [=↵] .
[C] → [=↵] → [0] → [=↵] → [4] [8] → [PSW] → [1] → [PSW] causes a preset value or "50" to be shown on the copy quantity indicator.
Substitute the value described above for "0-L" of the expression
50 x [(0 – L) x 10]= reference value for correction and type the result.
Eg.: If the result (reference value for correction) is 1.2 ;
50 – (1.2 x 10) = 38 value to be input
If the preset reference value is larger than the mid value "50", the 4. and 5. mirrors are set further away from lens.
If the preset reference value is smaller than mid value "50", the mirrors are set closer to lens.

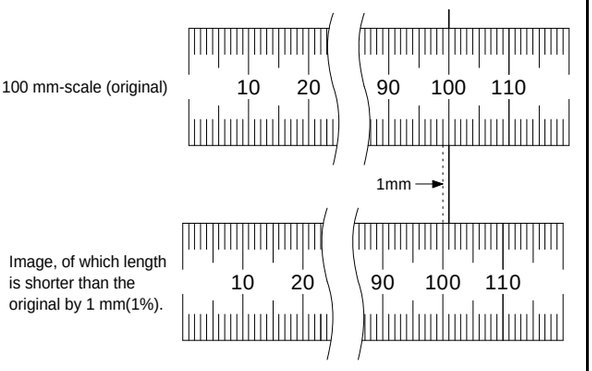


(3) Adjusting the Longitudinal Magnification

This adjustment must be done while the mirror bases A, B and C are in parallel with each other and the lens is focalized.
1 Set a scale on the original table as shown in the right figure.
2 Take a full-size copy of the scale using an A4-size(11" x 8.5") paper.
3 Compare the image on the paper with the scale.
4 Determine the correction factor for longitudinal magnification according to the following expression:
Correction factor for longitudinal magnification
$= \frac{(\text{original size} - \text{copy size})}{\text{original size}} \times 100\ (\%)$
Eg.: Correction factor for longitudinal magnification
$= \frac{(100 - 99)}{100} \times 100 = 1$



5 Perform Simulation 48-01 [=↵] .
[C] → [=↵] → [0/◊] → [=↵] → [4] → [8] → [PSW] → [1] → [PSW] → [=↵] causes a preset value of longitudinal magnification to be indicated.
6 Determine a preset value of longitudinal magnification according to the following expression:
Preset value of longitudinal magnification = [previous preset value(indicated at step 5)) + correction factor for longitudinal magnification] x 10
Eg.: Preset value = [25 + 1] x 10 = 35
7 Type the preset value of longitudinal magnification:
[ ] → [ ] → [PSW]
Changing the preset by "1" provides the magnification change of 0.1 %.
8 Take a full-size copy of the scale and compare the image length with the scale length.
9 The image length must be the same as the scale length. Otherwise, repeat the above steps 1 to 8 until this requirement is met.
F Press the clear all key to clear Simulation 48.

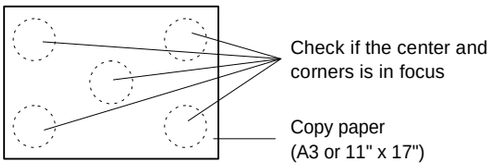


(4) Adjusting the Resolution

1 Perform Simulation 48-01 to check that a preset value corresponds to a focal length of lens used:
[C] → [0/◊] → [0/↵] → [=↵] → [4] → [8] → [PSW] → [1] → [PSW] .
When the ready lamp is lit, a preset value (ranging from 1 to 99) is indicated.
2 If no preset value exists, set a reference value according to (2)"Adjusting the reference position of 4. and 5. mirror". Then take a copy of "UKOG-0089CSZZ" and check the resolution.
3 When changing a preset value:
[ ] → [ ] → [PSW] .

Checking Procedure
After adjusting the reference position of 4. and 5. mirror, check as follows:
1 Set the test chart UKOG-0089CSZZ or a resolution test chart on the original table.
2 Take a full-size copy.
3 Check if the center and corners of the copy paper is in focus.
4 The resolution must be at least 5.0 lines/mm in the center and 4.5 lines/mm in the corners. Otherwise, repeat the steps 2 to 4 of (2) while changing the preset value by 1 at a time, until this requirement is met.

Applied Material: UKOG-0089CSZZ (Test chart)



(5) Adjusting the Lateral Magnification

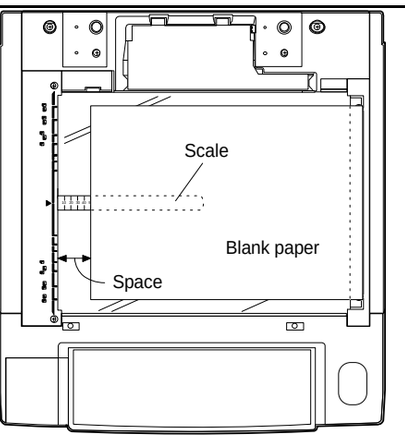
1 Set a scale on the original table as shown in the figure and perform Simulation 48-02.
The machine starts the warm-up cycle and the ready lamp is lit. At the same time a preset value (ranging from 15 to 35) is indicated.
Now take a full-size copy of the scale and determine the correction factor for lateral magnification according to the following expression:
Correction factor for lateral magnification = [(original size – copy size)/original size] x 100 (%)

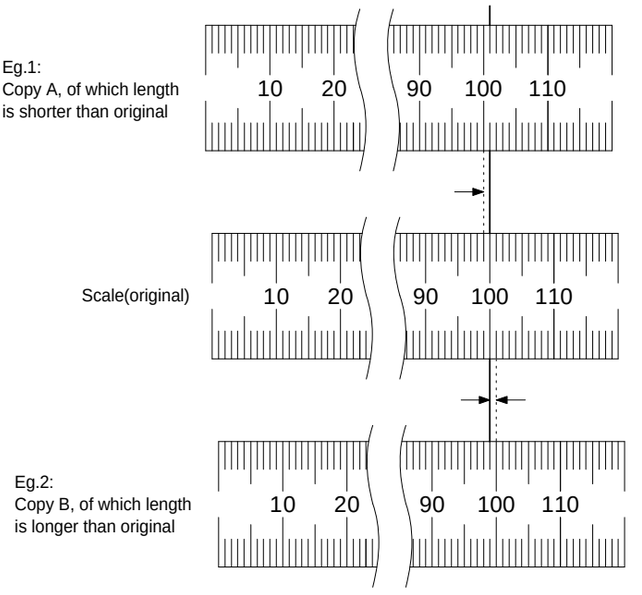
2 Use the correction factor to change the indicated value:
Value to be input = (preset value) + (correction factor for lateral magnification(%)) x 10
- Eg.1: 35 = 25 + 1 x 10
- Eg.2: 15 = 25 + (–1 x 10)

When a new value is typed and the print switch is turned on, the new value is stored in memory and the ready lamp goes off.

3 Clear Simulation 48-02.

Note: In Simulation 48-02 the correctable range of the preset value is limited from15 to 35.




Eg.1:
Copy A, of which length is shorter than original
10 20 90 100 110
Scale(original)
10 20 90 100 110
Eg.2:
Copy B, of which length is longer than original
10 20 90 100 110

(6) Inputting the Lens Travel Correction Value

(Simulation 26-08, 26-09)

<Inputting the lens characteristics>

The lens varies in focal length for each machine. The lens travel is required to correspond to the focal length of the lens. If the lens travels at a magnification would be constant among the machines in spite of the focal length irregularity, the magnification could vary depending on this irregularity.
To avoid this problem, we have prepared the table showing focal length ranks of lens and correction data (see the next page) which can be stored in memory at the time of Simulations described below. In order to copy properly at a magnification, the lens travel corresponding to its focal length is calculated on the basis of the stored data.

<When lens is replaced>

1 Set correction data according to the "focal length ranks of lens and correction data" table at following Simulation:
[C] → [=↵] → [0/↵] → [=↵] → [2] → [6] → [PSW] → [9] → [PSW] to perform Simulation 26-09.

When the ready lamp is lit, a preset value (ranging from 1 to 21) is indicated.

2 Input a new preset value.
Eg.: When a value shown on lens is +1.2, a correction value to be input is 14 according to the table.
[C] → [=↵] → [0/↵] → [=↵] → [2] → [6] → [PSW] → [8] → [PSW] to perform Simulation 26-08.

Value shown on the label	Test command 48-01	Test command 48-01 =↵	Test command 26-09 Zoom correction (No.4/5 mirror)	Test command 26-08 Zoom correction (lens)
+4.0	10	20	21	21
3.9	11	21		
3.8	12	22		
3.7	13	22	20	20
3.6	14	22		
3.5	15	23		
3.4	16	23		
3.3	17	24	19	19
3.2	18	24		
3.1	19	25		
3.0	20	25		
2.9	21	26	18	18
2.8	22	26		
2.7	23	27		
2.6	24	27		
2.5	25	28	17	17
2.4	26	28		
2.3	27	29		
2.2	28	29		
2.1	29	30	16	16
2.0	30	30		
1.9	31	31		
1.8	32	31		
1.7	33	32	15	15
1.6	34	32		
1.5	35	33		
1.4	36	33		
1.3	37	34	14	14
1.2	38	34		
1.1	39	35		
1.0	40	35		
0.9	41	36	13	13
0.8	42	36		
0.7	43	37		
0.6	44	37		
0.5	45	38	12	12
0.4	46	38		
0.3	47	39		
0.2	48	39		
+0.1	49	40	11	11
0	50	40		
–0.1	51	40		
0.2	52	41	10	10
0.3	53	41		
0.4	54	42		
0.5	55	42		
0.6	56	43	9	9
0.7	57	43		
0.8	58	44		
0.9	59	44		
1.0	60	45	8	8
1.1	61	45		
1.2	62	46		
1.3	63	46		
1.4	64	47	7	7
1.5	65	47		
1.6	66	48		
1.7	67	48		

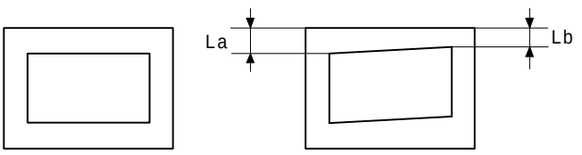
(Lens value input vs. test command input)

Value shown on the label	Test command 48-01	Test command 48-01 =↵	Test command 26-09 Zoom correction (No.4/5 mirror)	Test command 26-08 Zoom correction (lens)
1.4	64	47	7	7
1.5	65	47		
1.6	66	48		
1.7	67	48		
1.8	68	49	6	6
1.9	69	49		
2.0	70	50		
2.1	71	50		
2.2	72	51	5	5
2.3	73	51		
2.4	74	52		
2.5	75	52		
2.6	76	53	4	4
2.7	77	53		
2.8	78	54		
2.9	79	54		
3.0	80	55	3	3
3.1	81	55		
3.2	82	56		
3.3	83	56		
3.4	84	57	2	2
3.5	85	57		
3.6	86	58		
3.7	87	58		
3.8	88	59	1	1
3.9	89	59		
–4.0	90	60		

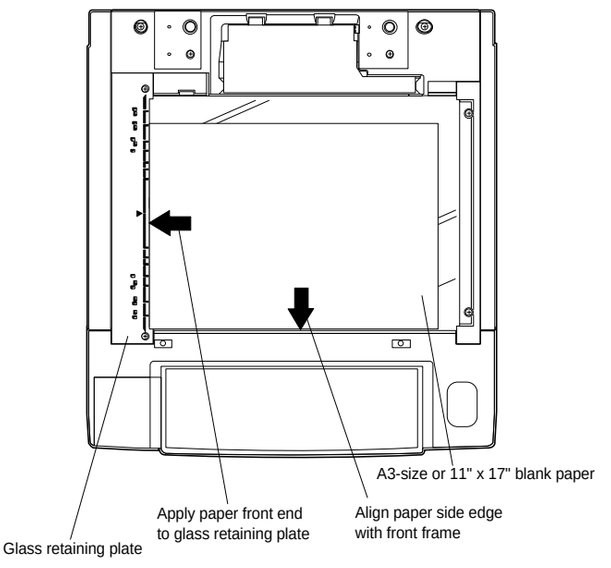
(Lens value input vs. test command input)

(7) Correcting the Longitudinal Distortion

Use this procedure when replacing the mirror base driving wire.

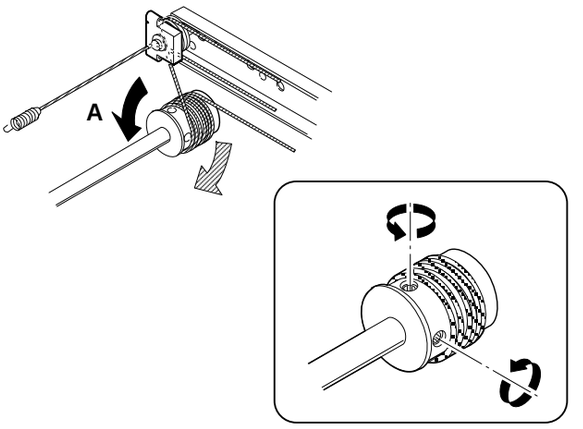


1 Set an A3-size or 11" x 17" blank paper on the original table while applying the paper end to the glass retaining plate and aligning the paper side edge with the front frame, as shown in the right figure.
2 Use an A3-size or 11" x 17" copy paper to take a full-size copy with the original cover opened.
3 Measure the width of solid at front and rear ends of the copy paper.


A3-size or 11" x 17" blank paper
Apply paper front end to glass retaining plate
Align paper side edge with front frame
Glass retaining plate

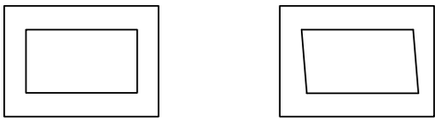
If the width of the front end solid (La) is equal to that of the rear end solid (Lb), no adjustment is required.
Otherwise, follow the steps 4 to 7 described below:

4 Loosen screws securing the mirror base driving pulley on the rear frame side.
   If La is bigger than Lb, rotate the mirror base driving pulley on the rear frame side in the A direction. (Do not rotate the flange and the shaft of the mirror base driving pulley).
   If La is smaller than Lb, rotate the mirror base driving pulley on the rear frame side in the B direction. (Do not rotate the flange and the shaft of the mirror base driving pulley).
5 Tighten the screws securing the mirror base driving pulley.
6 Repeat steps 1 to 3 .
7 If La is not equal to Lb, repeat steps 4 and 5 until La=Lb.



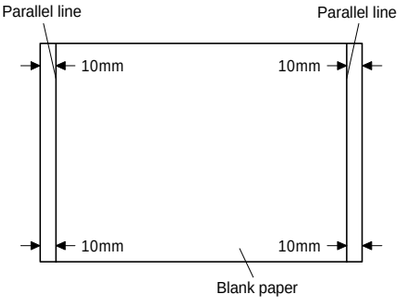
(8) Correcting the Lateral Distortion

If the lateral distortion occurs without the longitudinal distortion(distortion in the mirror base scanning direction), the lateral distortion can be corrected by adjusting the height of 2. and 3. mirror base and/or the eccentric roller of 4. and 5. mirror base.
The correction procedure is as follows:

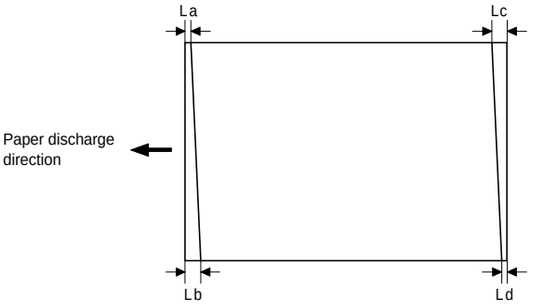


Original Copy

1 Preparing the reference original:
   On an A3-size or 11" x 17" blank paper, draw 2 parallel lines at the positions 10 mm away from the both ends.



2 Take a full-size copy of the paper using an A3-size or 11" x 17" paper.
3 Measure and the distance between the paper end and the line at 4 positions (La, Lb, Lc and Ld).



If La=Lb and Lc=Ld, no adjustment is required.
If La>Lb(Lc<Ld), rotate the eccentric roller in one direction to raise the front frame side of the 4. and 5. mirror base unit.
If La<Lb(Lc>Ld), rotate the eccentric roller in the other direction to lower the front frame side of the 4. and 5. mirror base unit.
Note: Remember how much the roller is rotated.
(One rotation of the roller causes the height of the front frame side to change by 2 mm and the difference between La and Lb to change by 4 mm).

* After opening the front cabinet, the adjustment described above can be made through the access hole.

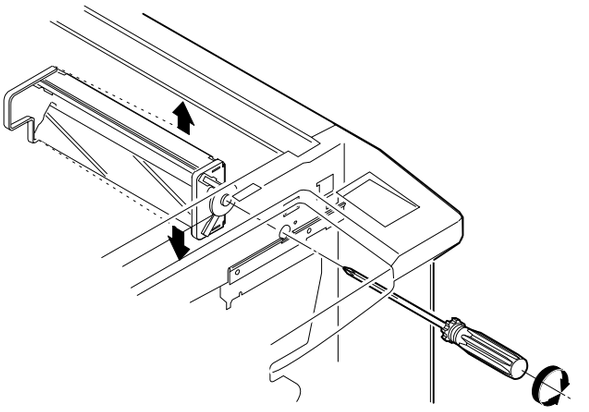
If the above procedure does not provide sufficient adjustment, follow the steps shown below:

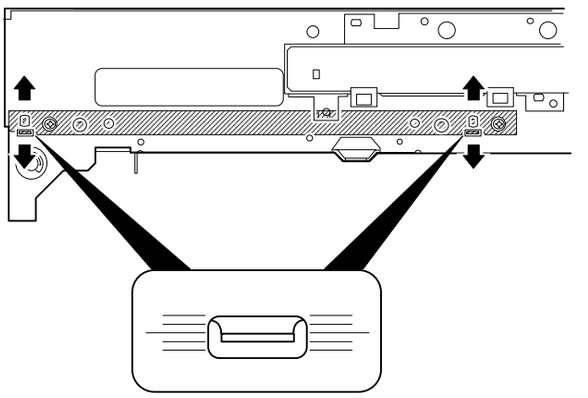
1 Move the B rail of the mirror base upward or downward (in the arrow direction).
If La>Lb, raise the mirror base B rail on the paper discharge side by one-half of (La-Lb).
If La<Lb, lower the mirror base B rail on the paper discharge side by one-half of (Lb-La).
ex.:
When La=12 mm and Lb=9 mm, raise the mirror base B rail on the paper discharge side by 1.5 mm.

If Lc>Ld, lower the mirror base B rail on the paper discharge side by one-half of (Lc-Ld).
If Lc<Ld, raise the mirror base B rail on the paper discharge side by one-half of (Ld-Lc).
(Grasping the grip of the mirror base rail, move the mirror base rail).

2 Adjust the eccentric roller as described in 1) until La=Lb and Lc=Ld.

3 After adjustment, manually rotate the mirror base driving pulley to check that the mirror base A and B do not come into contact with each other during full-scanning motion.
Note: If the mirror base rail is moved excessively, the mirror bases may contact with each other.

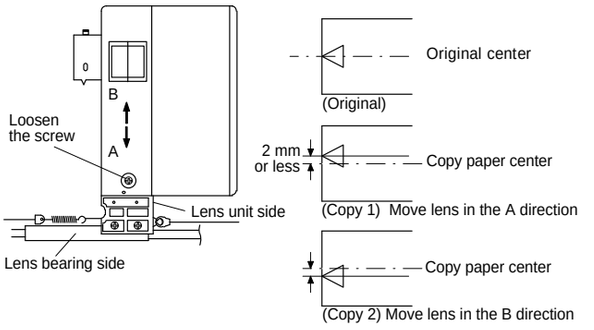




(9) Adjusting the Center Deviation

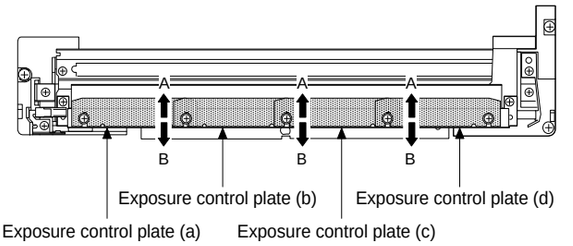
Take a full-size copy and compare the copy with the original.
If the deviation of the copy center from the original center, move the lens in the arrow direction so that the deviation is 2 mm or less.

Note: After moving the lens, adjust the position of the blank lamp because a change of the reference center position results in a change of the blank lamp position.

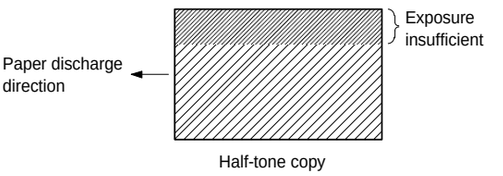


(10) Adjusting the Exposure Balance

Take a half-tone copy, and move the exposure control plate a, b and c to adjust the exposure balance. Movement of the plate in the A direction provides less exposure and the B direction more exposure.



Eg. If the copy is as shown in the figure, move the exposure control plate in the B direction to achieve the exposure balance.



(11) Adjusting the Copy

Simulation 50-01 or 50-02 allows the copy adjustment.
(Full-size copy)
Image loss 0 ~ 3 mm (Registration)
Void area 1 ~ 3 mm

(When using Simulation 50-01)

In this simulation, the following keys have special functions:

REDUCE key: This key is used to set the magnification to 50%.

ENLARGE key: This key is used to set the magnification to 200%.

ZOOM-UP key: For each operation of this key, A → b → C → A → are indicated in this order and the copy quantity indicator shows a preset value as follows:

A: Preset value of RRC-A
b: Preset value of RRC-B
C: Preset value of void

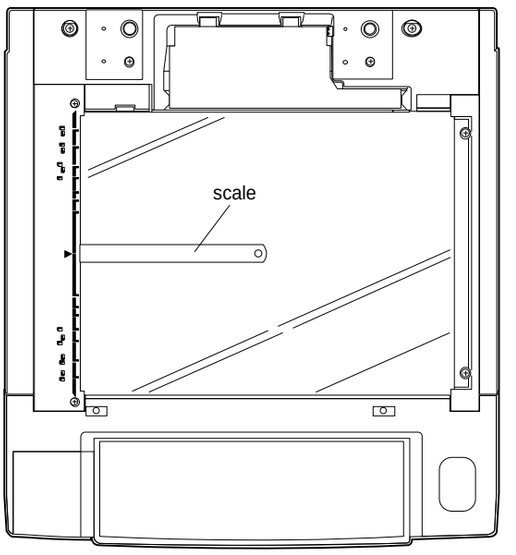
(When pressing the zoom-up key, a preset value currently shown on the copy quantity indicator is stored in memory).

ZOOM-DOWN key:

For each operation of this key, A → C → b → C → A → are indicated in this order and the copy quantity indicator shows a preset value corresponding to a current indication. Other details are the same as those of the zoom-up key.

Display:

During execution of Simulation 50, the copy quantity indicator shows a value of RRC-A and the magnification indicator shows "10A". Upper 2 digits of the value shown on the magnification indicator means a magnification and lower 1 digit "A" means that a value of RRC-A is shown on the copy quantity indicator.



Adjusting Procedure

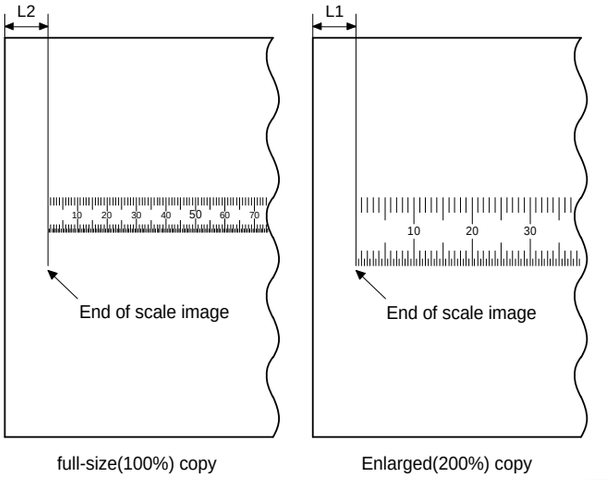
1 Set a scale on the original table.

2 [C] → [=↵] → [0/◊] → [=↵] → [5] → [0/◊] → [PSW] → [1] → [PSW] to perform Simulation 50. When the ready lamp goes on, a preset value (ranging from 1 to 99) is indicated. Content of RRC-A.

3 Set values of both A and B to 0 and take a copy of the scale at magnification of 100% and 200% respectively.
- A full-size(100%) copy can be taken by typing
- [0/◊] → [0/◊] → [ZOOM-UP] → [0/◊] → [0/◊] → [PSW] .
- A enlarged(200%) copy can be taken by typing [ENLARGE] → (After the lens moves, ready lamp ON) → [PSW] .

4 Measure a distance from the paper end to the image (scale) end of each copy, and calculate the values of RRC-A and RRC-B with the following expressions:

If the preset value of RRC-A is not appropriate, the images at the both magnifications differs in end position. RRC-B is a preset value used to control the RRC ON-timing so that the end of the drum image is aligned with the end of a copy paper.

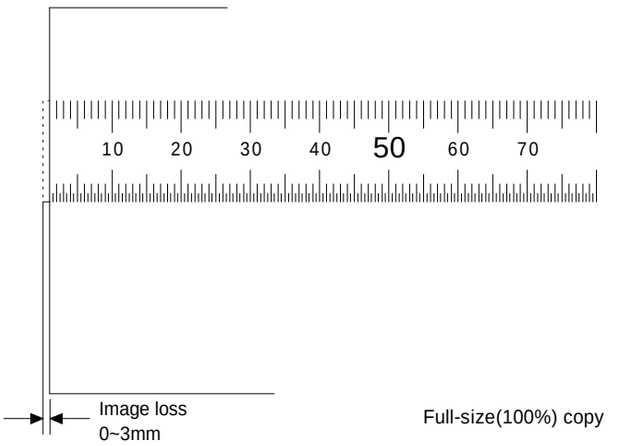


- L1: End deviation at 200% magnification
- L2: End deviation at 100% magnification
- RRC-A = 4.093 x (L1 – L2)
- RRC-B = 10.526 x L2 – 5.263 x L1

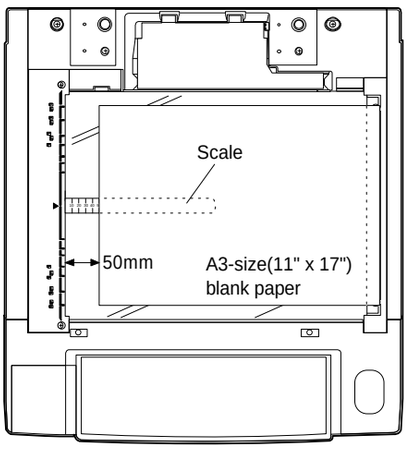
5 Using ten keys, input the values of RRC-A and RRC-B given by the expressions shown above. For input procedure see 3).

6 Take copies at 200%, 100% and 50% magnification and check the deviation difference at each magnification is less than approx. 1 mm.
If the difference is larger than 1 mm, repeat step 3 to 6 .

7 Take a 100% copy to check the image loss for 3 mm or less. If the image loss is larger than 3 mm, change the content of RRC-B so that the range of the image loss is 3 mm or less.
Note: The image loss value adjusted as described above is the image loss value adjusted in Simulation 50-01, and not the final value.

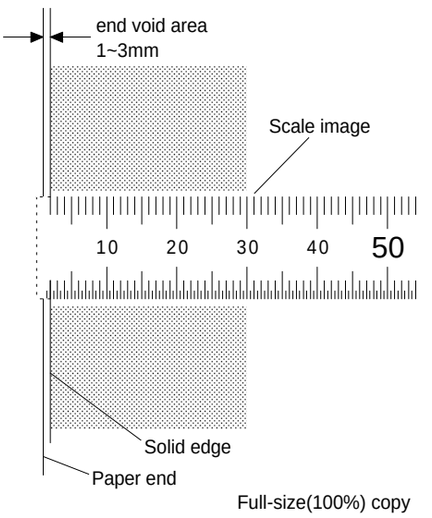


8 Set a scale and an A3-size(11" x 17") blank paper on the original table as shown in the figure.



9 Operate the zoom key so that the lower 1 digit of the magnification indicator is "C". (Void adjusting mode)

F Take a copy. Type a value for adjusting the end void area of the full-size copy so that, measured with the scale image, the solid edge is 1 ~ 3 mm away from the paper end.
The key operation □ → □ → PSW provide a copy and sets the input value. The input value of "1" corresponds to 0.2 mm in void area. Larger input value provides larger void area.



G Take a full-size copy and check if the image loss and the void area meet the following standards:
(Standard value)
Image loss: 0 ~ 3 mm
Void area: 1 ~ 3 mm

H Press the clear key to clear Simulation 50-01.

Note: After changing the RRC-A and RRC-B settings, always adjust the void area of copy end.

(When using Simulation 50-02)

The key and indicator functions in Simulation 50-02 are the same as those in Simulation 50-01.
Simulation 50-02 permits the values of L1 and L2 to be directly input and the end adjustment to be easily performed.

Adjusting Procedure

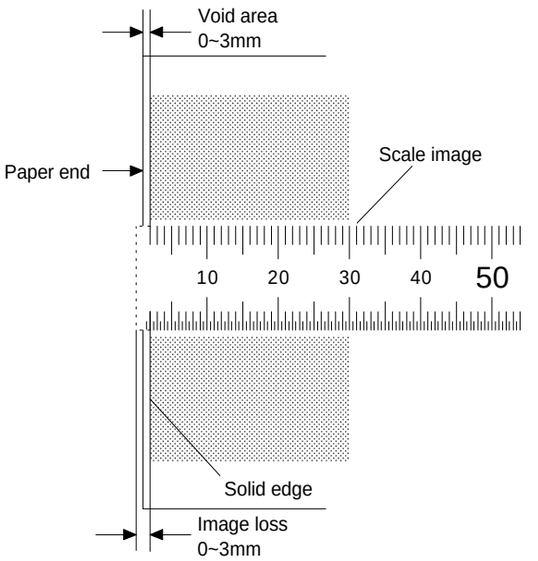
1 Set a scale on the original table.

2 [C] → [=↵] → [0/◊] → [=↵] → [5] → [0/◊] → [PSW] → [2] → [PSW] to enter the Simulation 50-02 mode.
The machine starts warm-up operation.

3 The copy quantity indicator shows upper 2 digits of 3-digit L1 value and the magnification indicator shows "10A". The upper 2 digits on the magnification indicator means the magnification(100%) and the lower 1 digit "A" means that the value of L1 is indicated on the copy quantity indicator.
- L1: End deviation at 200% magnification (FFF mm: 3-digit)
- L2: End deviation at 100% magnification (XXX mm: 3-digit)

Indication example of copy quantity indicator
42.5 mm → [4] [2] [5] → indicated as [2] [5]

4 Using the zoom key and ten keys, set both A and b values to 0 and take a copy at magnification 100% and 200% respectively.
- An 100% copy can be taken by typing [0/◊] → [0/◊] → [0/◊] → [ZOOM-UP] → [0/◊] → [0/◊] → [0/◊] → [PSW] .
- A 200% copy can be taken by typing [ENLARGE] → (After the lens moves, ready lamp ON) → [PSW] .



Full-size(100%) copy

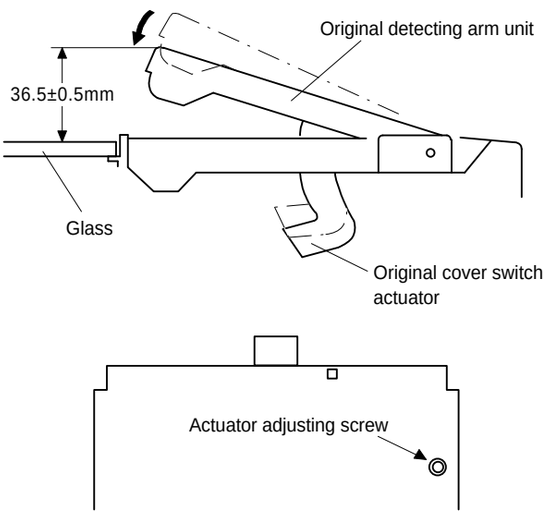
5 Measure the distance from the paper end to image(scale) end of the 200% and 100% copy, and using the zoom key and ten keys, type the L1 and L2 values.
The RRC-A and RRC-B values of Simulation 50-01 are automatically calculated and stored in memory.
Input Procedure
Assuming the L1 is 25.4 mm and L2 is 15.0 mm:
After checking that the lower 1 digit of the magnification indicator is A, [2] → [5] → [4] ("54" indicated on the copy quantity indicator) → [ZOOM-UP] → [1] → [5] → [0] ("50" indicated) → [PSW] .

6 Adjust and check the deviation, image loss and void area in the same manner as in case of Simulation 50-01.

4. Adjustment of Original Detecting Mechanism

(1) Adjusting the Original Detecting Arm Unit

1 Adjusting the timing when the original cover switch is turned on (This adjustment should be made by the fabricator).
[C] → [P] → [0] → [P] → [4] → [1] → [PSW] → [1] → [PSW] to perform Simulation 41-01.
- Loosen the screw for adjusting the original cover switch actuator. Adjust the actuator position so that, when bringing down the original detecting arm unit slowly, the automatic paper-selection lamp goes on at the instant when the distance from the surface of the original glass plate to the top of the arm unit reaches 36.5±0.5 mm.
(Error in timing when the original cover switch is turn on may causes a fault in operation of the original detecting mechanism).



(2) Adjusting the Original Detection Level

(Input of Original Detection Level)

The original detection level is a reference level used to decide whether a original exists on the original table or not and to monitor the status of the individual detection sensor.

Input Procedure

1 [C] → [=↵] → [0] → [=↵] → [4] → [1] → [PSW] → [2] → [PSW] .

The ready lamp(RPW) and the automatic magnification select lamp go on.

2 With the original cover opened, turn on the print switch(PSW) with no original on the original table.

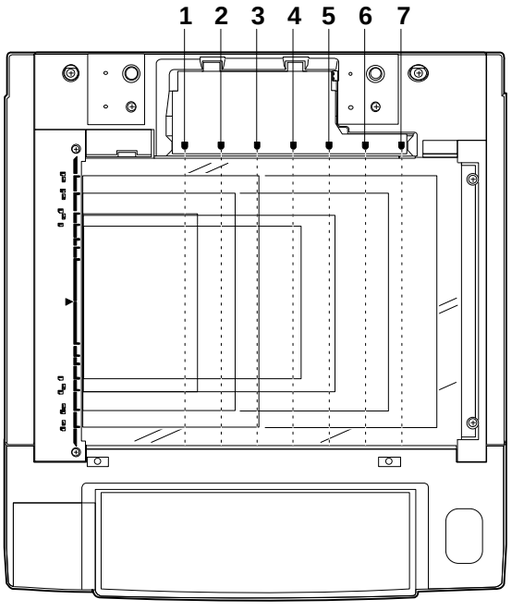
The ready lamp goes off momentarily, and the moment it goes on again, the pause lamp goes on. (The sensor level in the absence of original is read in memory).

3 Set an A3-size(11" x 17") copy paper on the original table, and with the original cover opened, turn on the print switch. (The sensor level in the presence of original is read in memory). The machine stores the sensor level for deciding the absence/presence of original in memory.

* (The sensor level can be viewed using Simulation 41-03).

<Remarks> Principle of Detection Level Setting

The machine averages the sensor levels in the presence and absence of original and stores the result (medium value) in memory.


1 2 3 4 5 6 7
Sensor level
Sensor level in the absence of original
Identification level (medium value)
Sensor level in the presence of original

(Sensor Check Mode)

The detection levels of the photosensors can be viewed using Simulation 41-01. (After the original detection levels are input, the machine enters the check mode automatically).

Procedure for checking the photosensor

- [C] → [=↵] → [0] → [=↵] → [4] → [1] → [PSW] → [1] → [PSW] . All the original size indication lamp and automatic paper select lamp go on. When the light emitter of the original size detection LED is blocked, the original size lamp goes off.

* The arrangement of photosensors is as follows:

Bearing	Internal AB system	External AB system	External Inch system
1	—	A5	8-1/2 x 5-1/2"
2	B5	A4	8-1/2 x 11"
3	A4	—	—
4	B5R	–A4R	8-1/2 x 11"(R)
5	A4R	—	—
6	B4	B4	8-1/2 x 14"
7	A3	A3	17"

The automatic original select lamp goes on when the original cover is opened, and goes off when the original cover is closed.

When detecting that the original cover is closed, the original size indication lamp goes off.

(Checking the Light Receiving Level and Decision Level)

The light receiving level and decision level can be viewed using Simulation 41-03.

1 Light receiving level indication mode

[C] → [=↵] → [0] → [=↵] → [4] → [1] → [PSW] → [3] → [PSW] .

- During Simulation 41-03, the light receiving level is shown on the copy quantity indicator.
- When using ten keys to input a value corresponding to each sensor after Simulation 41-03, a corresponding original size indication lamp goes on, thus permitting the light receiving level of each sensor to be checked.
- The automatic paper select lamp goes on when the original cover is opened, and goes off when the original cover is closed.

2 Level setting indication mode

[C] → [=↵] → [0] → [=↵] → [4] → [1] → [PSW] → [3] → [PSW] → AUTO IMAGE SELECT.

- The pause lamp goes on by the above operation.
- The level of each sensor specified in Simulation 41-02 is shown on the copy quantity indicator.
- When using ten keys to input a value corresponding to each sensor after Simulation 41-03, a corresponding original size indication lamp goes on, thus permitting the specified level of each sensor to be checked.

5. Adjustment of Copy Density

1. When must the copy density be adjusted ?

- When doing maintenance;
- After adjusting the output current of the main charger and transfer charger, the bias voltage of the separation charger and the grid voltage (After replacing the charger unit and/or the high voltage unit);
- After adjusting the developing bias;
- After replacing parts in the AC PWB unit;
- After replacing the automatic exposure sensor;
- After replacing the copy lamp;
- After replacing the optical unit;
- After disassembling, repairing and/or adjusting the optical unit;
- After moving the exposure control plate;
- After replacing the drum;
- After replacing the main substrate

2. Notes on adjustment of copy density

Before adjusting the copy density, do the followings:

1 Clean the optical system(original glass plate, lens, mirror, copy lamp, reflector).

2 Clean the automatic exposure sensor (clean the surface of the photosensor with waste soaked with alcohol or water).
(Note: The use of dry waste will cause dust adhesion on the surface of the sensor due to static electricity).

3 Clean the (main, transfer and separation) charger wire and the screen grid.

4 Clean the blank lamp and the separation lamp around the drum holder unit.

5 Clean the drum cleaning blade. (After cleaning, always apply powder on the blade).

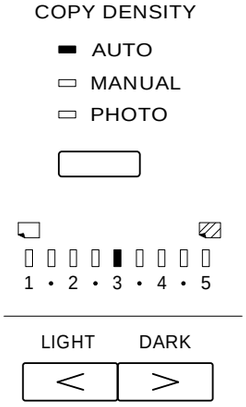
Note: Perform the manual-exposure density adjustment first, and then perform the auto-exposure density adjustment.

Note:
- **This machine automatically performs the correction to the optical system dirt.**
  When Simulation 46-01 is performed, each mode correction is initialized. When performing Simulation 46-01, perform the adjustments of all modes.
- **This machine automatically performs the correction to the sensitivity degrading due to aging of the photo conductor. When Simulation 20 is performed, the correction state is initialized. Simulation 20 should be performed always before Simulation 46-01.**

3. Procedure for copy density adjustment

(1) Initial setting of auto-exposure density level (User adjustment)

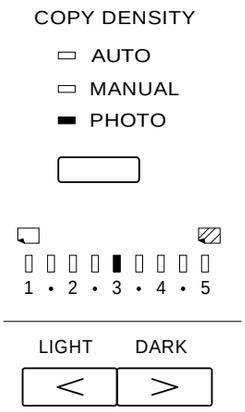
Enter the auto-exposure copy (AUTO) mode, open the front door and press down the mode exchange key for at least 3 sec. The density level LED is lit. Then set the density to "3" with [LIGHT] and [DARK] keys.



(2) Initial setting of TSM mode (User adjustment)

Enter the PHOTO copy mode, open the front door and press down the mode exchange key for at least 3 sec. The density level LED is lit. Then initial-set the density to the normal mode with [LIGHT] and [DARK] keys.

Density level indicated "3": Normal mode
"1": TSM mode

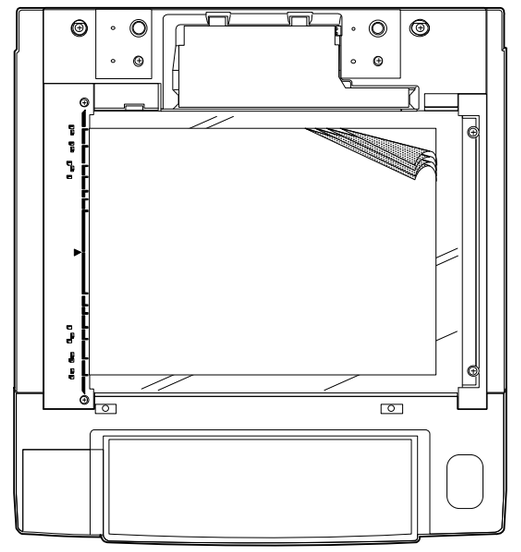


(3) Adjustment of AE sensor level

1 Perform Simulation 47. (The mirror base makes scanning motion and stops at AE sensor level measuring position).

2 Place four or five A3-size (or 11" x 17") papers one upon another on the original table.

3 Press the print switch again. The copy quantity indicator shows the AE sensor output level for blank paper, which is stored in memory.



(4) Setting of drum sensitivity

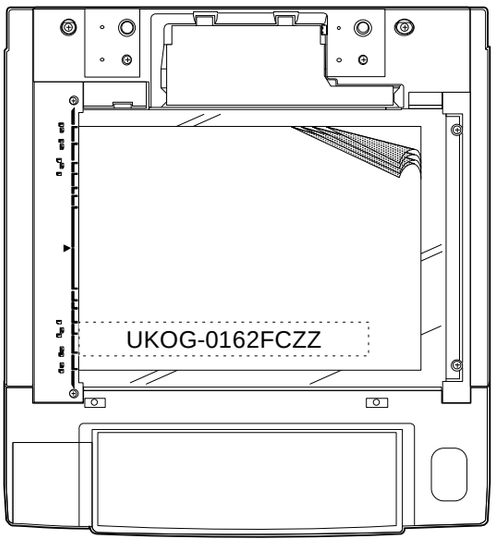
1 Perform Simulation 26-07 and check that the first digit of the 4-digit drum number printed on the front-frame sided drum flange is shown on the copy quantity indicator.

2 If the indicated number differs from the drum number, press the copy quantity key to change the setting.

Note: If the setting is done with the copy quantity key, the indicated number is limited to 1, 2 or 3.

(5) Setting of test chart

1 Align four or five papers with at least 120 mm in width and approx.420 mm in length one upon another.



2 Set the test chart (UKOG-0162FCZZ) on this side of the papers.

UKOG-0162FCZZ DENSITY No.	1	2	3	4	5	6	7	8	9	10	W
UKOG-0089CCZZ DENSITY No.	0.1		0.2		0.3				0.5	1.9	0
KODAK GRAY SCALE		1		2		3		4		19	A

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(6) Adjustment of copy density

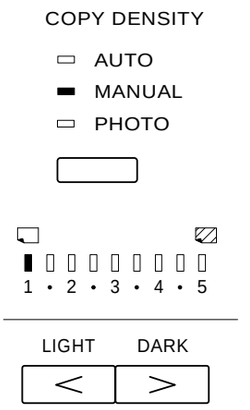
A. Checking the developing bias output
Check that the output value is -215 V when the exposure is set to "1" in the manual exposure mode. Perform Simulation 8-01 for checking the developing bias.

B. Adjusting the density in manual exposure

1 Perform Simulation 46-01 for adjusting the copy density.
The exposure indicator of the operation panel shows "1" of the manual copy mode.

2 Take a copy.
Check that the "6" of UKOG-0162FCZZ (or 0.5 of UGOG-0089CSZZ) has slightly copied and "5"(0.3) no copied.

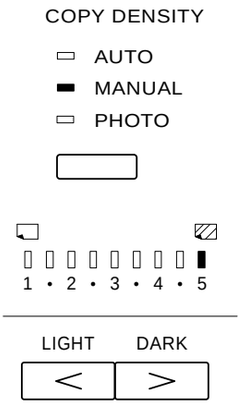
<When light> Decrease the value shown on the copy quantity indicator.
<When dark> Increase the value shown on the copy quantity indicator.
* available values : 1-99



3 When the copy density meets the above requirement, press the exposure key [DARK] so that "5" is shown on the density indicator.

4 Make a copy.
Check that the "2" of UKOG-0162FCZZ (or 0.2 of UGOG-0089CSZZ) has slightly copied and "1"(0.1) no copied.

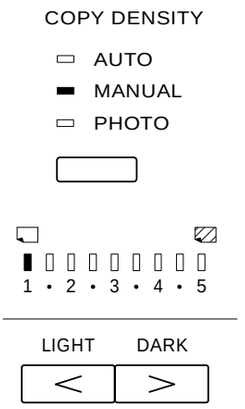
<When light or dark> See 2).



C. Adjusting the TSM mode

1 Press the exposure mode exchange key to enter the TSM mode.
On the exposure indicator of the operation panel, MANUAL and PHOTO is simultaneously lit and "1" is shown.

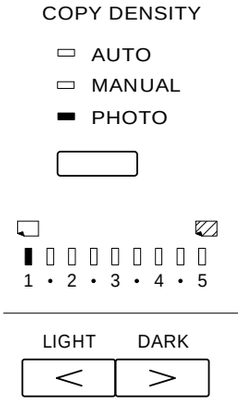
2 Use the same procedures as those of B. 2 to 4 to adjust the exposure "1" and "5".



D. Adjusting the photo mode

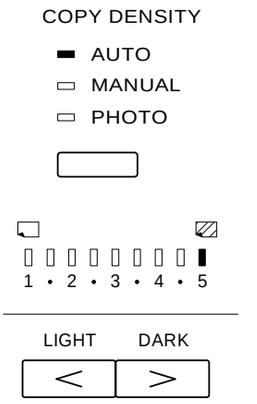
1 Press the exposure mode exchange key to enter the photo mode.
The exposure indicator of the operation panel shows "1" of the photo mode.

2 Use the same procedures as those of B. 2 to 4 to adjust the exposure "1" and "5".



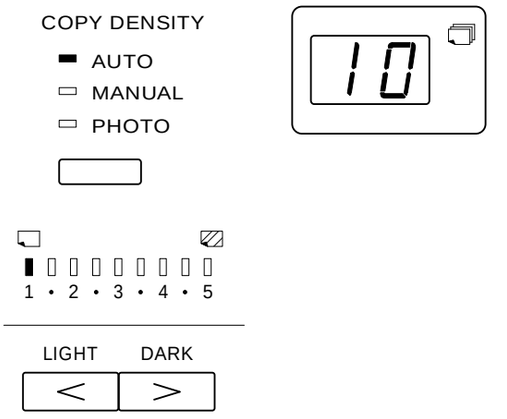
E. Adjusting the auto(normal) mode

1 Press the exposure mode exchange key to enter the auto(normal) mode.
The exposure indicator of the operation panel shows "5" of the auto mode.



2 Press [LIGHT] key until "1" is indicated.

3 Replace "1" with "10".

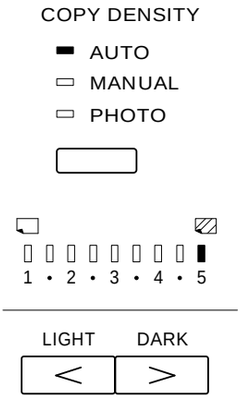


4 Press [DARK] key until "5" is indicated.

5 Make a copy.
Check that the "3" of UKOG-0162FCZZ (or 0.2 of UGOG-0089CSZZ) has slightly copied.
If the above condition is not met, readjust as follows:

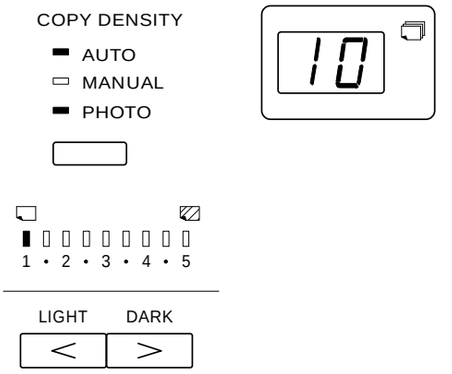
<When light> Decrease the value shown on the copy quantity indicator.

<When dark> Increase the value shown on the copy quantity indicator.



2 Press [LIGHT] key until "1" is indicated.

3 Replace "1" with "16".

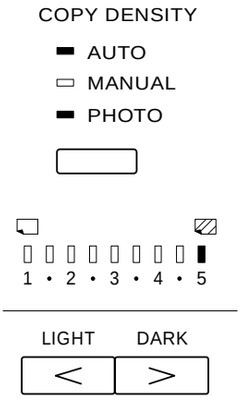


4 Press [DARK] key until "5" is indicated.

5 Use the same procedures as those of E. 5 to adjust the density.

(2) Adjusting the auto (toner save) mode

1 Press the mode exchange key to enter the auto (toner save) mode.
On the exposure indicator of the operation panel, AUTO and PHOTO is simultaneously lit and "5" is indicated.



Procedures for Adjusting the Copy Density

<table>
<tr><th colspan="3">Item</th><th>Description</th></tr>
<tr><td colspan="3">(1) Auto-exposure density level</td><td>3 (exposure indication)</td></tr>
<tr><td colspan="3">(1')Initial setting of TSM mode</td><td>3 (normal mode)</td></tr>
<tr><td colspan="3">(2) Setting of AE sensor characteristics</td><td>Perform Simulation 47</td></tr>
<tr><td colspan="3">(3) Setting of drum sensitivity</td><td>Perform Simulation 26-07</td></tr>
<tr><td colspan="3">(4) Setting of test chart</td><td>Test chart comparison table
<table>
<tr><td>UKOG-0162FCZZ
DENSITY No.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td></td><td>W</td></tr>
<tr><td>UKOG-0089CSZZ
DENSITY No.</td><td>0.1</td><td></td><td>0.2</td><td></td><td>0.3</td><td></td><td></td><td></td><td>0.5</td><td>1.9</td><td></td><td>0</td></tr>
<tr><td>KODAK GRAY SCALE</td><td></td><td>1</td><td></td><td>2</td><td></td><td>3</td><td></td><td>4</td><td></td><td>19</td><td></td><td>A</td></tr>
</table>
SHARP CORPORATION
MADE IN JAPAN</td></tr>
<tr><td colspan="3">(5) Adjustment of copy density</td><td></td></tr>
<tr><td></td><td colspan="2">A. Adjusting the developing bias output</td><td>–215 V (manual exposure 1)
Perform Simulation 8-01</td></tr>
<tr><td></td><td colspan="2">B. Adjusting the manual-exposure copy density</td><td>Perform Simulation 46-01</td></tr>
<tr><td></td><td></td><td>Manual exposure 1</td><td></td></tr>
<tr><td></td><td></td><td>Manual exposure 5</td><td></td></tr>
<tr><td></td><td colspan="2">C. Adjusting the TSM mode</td><td>Perform Simulation 46-01 → EXPOSURE.MODE.CHANGE key</td></tr>
<tr><td></td><td></td><td>Manual/photo exposure 1</td><td></td></tr>
<tr><td></td><td></td><td>Manual/photo exposure 5</td><td></td></tr>
<tr><td></td><td colspan="2">D. Adjusting the copy density in photo mode</td><td>Perform Simulation 46-01 → EXPOSURE.MODE.CHANGE key</td></tr>
<tr><td></td><td></td><td>Photo exposure 1</td><td></td></tr>
</table>

Item			Description
		Photo exposure 5	
	E. Adjusting the auto-exposure copy density		Perform Simulation 46-01 → EXPOSURE.MODE.CHANGE key Press LIGHT until "1" is indicated, and replace it with "10"
		(1) Normal mode Auto exposure 1	
		Auto exposure 5	
		(2) TSM mode Auto/photo exposure 1	Press LIGHT until "1" is indicated, and replace it with "10"
		Auto/photo exposure 2	

[8] Test commands and diagnostics

1. Test command

(1) Introduction

The following can be done with test command.

- Used to operate any functional block independently to check its function.
- Used to adjust the machine.
- Used to set up functions.

(2) Purpose

It allows to help repairing and adjusting the machine using test command.
When the PAUSE key is pressed in a course of test command being executed, the test command is interrupted with the copy number window turned off and becomes ready to accept entry of a test command number.

*1: If the PAUSE key was pressed for more than five minutes, it may not go into the test command mode.

*2: Further operation may be needed depending on the kind of test command.

*3: One of the next methods is required to cancel the test command as it varies according to the test command. The machine then starts from the state immediately after power on.

— Other than test command 7
The test command is canceled when the CLEAR ALL key is pressed.

— Test command 7
One of the following operation cancels the test command execution.

1. Power switch off.
2. Press the CLEAR → PAUSE → 0 → PAUSE → CLEAR ALL keys.

— Test command 14
The test command 14 is used to clear the memory contents (H2, H3, H4) that has been stored in it. After the test command 14 has been executed, the diagnostic is automatically terminates.

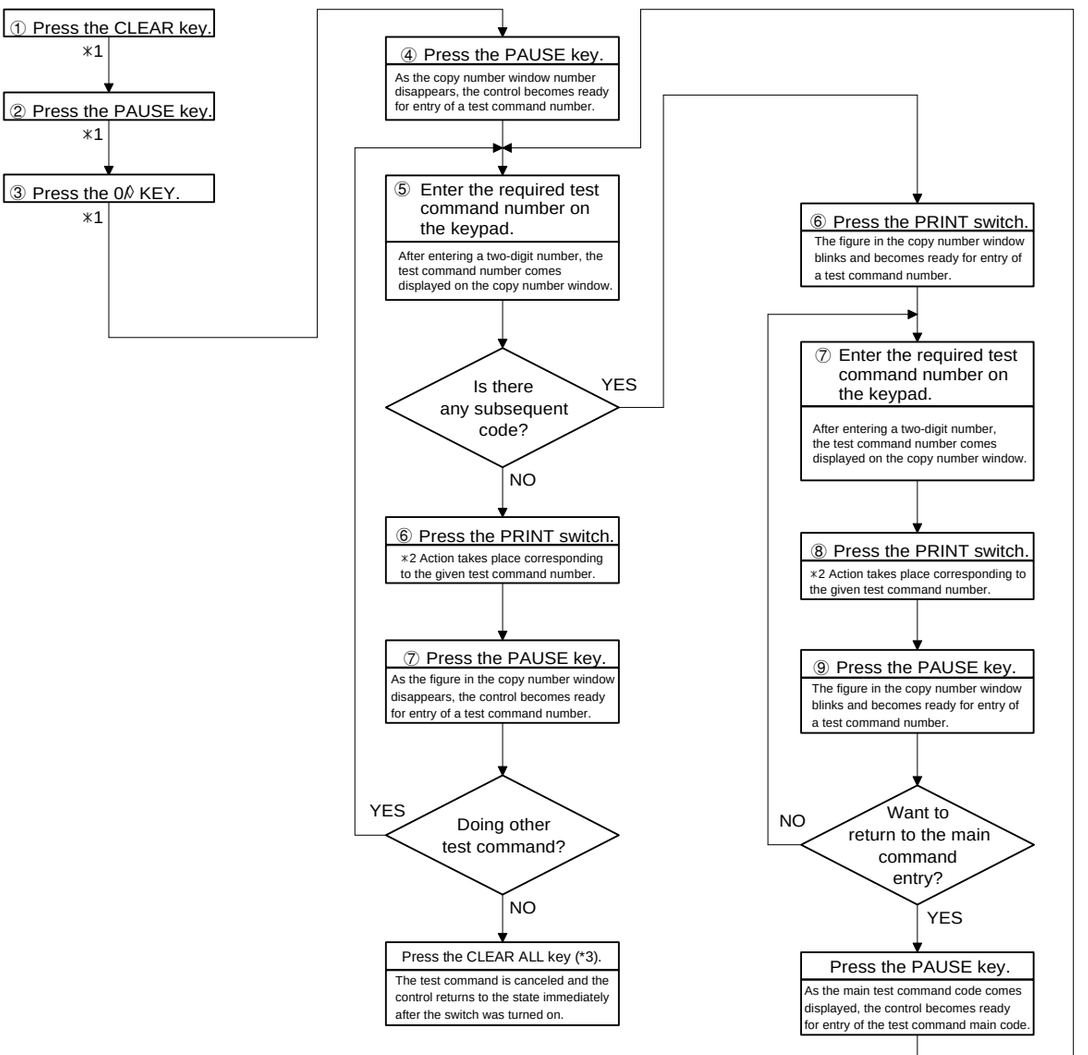
— Special keys
CLEAR ALL key: Test command mode → normal mode.

PAUSE key: Execution of test command is interrupted. Returns to 5 , if 9 when the subsequent is on display.

CLEAR key: Clears the copy number window.

— The diagnostic is automatically terminates after the doorswitch operation "ON → OFF → ON", except "H", "U2" code.

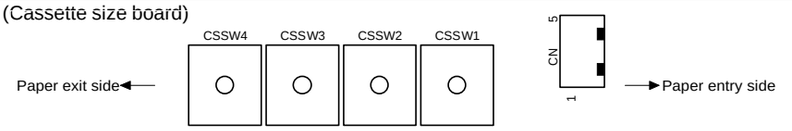
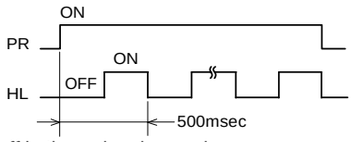
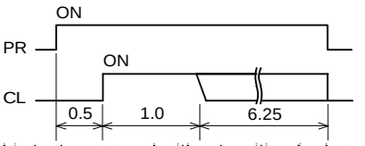
3) Test command execution procedure

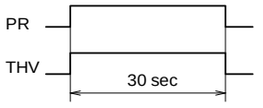

① Press the CLEAR key.
*1
② Press the PAUSE key.
*1
③ Press the 0/ KEY.
*1
④ Press the PAUSE key.
As the copy number window number disappears, the control becomes ready for entry of a test command number.
⑤ Enter the required test command number on the keypad.
After entering a two-digit number, the test command number comes displayed on the copy number window.
Is there any subsequent code?
YES
NO
⑥ Press the PRINT switch.
*2 Action takes place corresponding to the given test command number.
⑦ Press the PAUSE key.
As the figure in the copy number window disappears, the control becomes ready for entry of a test command number.
Doing other test command?
YES
NO
Press the CLEAR ALL key (*3).
The test command is canceled and the control returns to the state immediately after the switch was turned on.
⑥ Press the PRINT switch.
The figure in the copy number window blinks and becomes ready for entry of a test command number.
⑦ Enter the required test command number on the keypad.
After entering a two-digit number, the test command number comes displayed on the copy number window.
⑧ Press the PRINT switch.
*2 Action takes place corresponding to the given test command number.
⑨ Press the PAUSE key.
The figure in the copy number window blinks and becomes ready for entry of a test command number.
Want to return to the main command entry?
NO
YES
Press the PAUSE key.
As the main test command code comes displayed, the control becomes ready for entry of the test command main code.

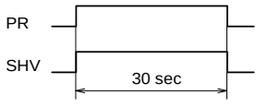
<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>1</td><td>01</td><td>This is the test command used to test the optical system. The mirror base automatically starts to scan.
(1) With depression of the PAUSE key, the control moves from the test command mode to be ready to execute it. The READY pilot lamp (RPL) comes active with the zoom ratio at 100%. It is possible to change the zoom mode using the ZOOM key.
(2) When the PRINT key is pressed while the RPL is active, the status lamp turns off and the test command starts to execute. The mirror base moves to scan in the zoom ratio at that time.
(3) If the door is opened while the operation is in process, the operation is interrupted with status "CH" prompted. Closing the door will start the operation all over again from its initial step.</td><td></td></tr>
<tr><td></td><td>02</td><td>This is the test command used to test the optical system sensors. When the test command starts, it starts to test the on/off action of a optical system sensor shown by one of the following lamps.
<table>
<tr><th></th><th>Active status lamp</th></tr>
<tr><td>MENTEL (maintenance lamp)</td><td>Mirror rotary encoder pulse (RE) input</td></tr>
<tr><td>DVPL (developer maintenance lamp)</td><td>Mirror home position input</td></tr>
<tr><td>TNFL (full waste toner lamp)</td><td>Lens home position sensor</td></tr>
<tr><td>TPL (toner empty lamp)</td><td>No.4/5 mirror home position sensor</td></tr>
</table></td><td></td></tr>
<tr><td></td><td>03</td><td>Used to test the zoom lens movement.
• The zoom ratio is displayed on the zoom ratio window.
AB series machine 100% → 50% → 70% → 81% → 86% → 115% → 122% → 141% → 200% →
Inch series machine 100% → 50% → 64% → 77% → 95% → 121% → 129% → 141% → 200% →</td><td></td></tr>
<tr><td></td><td>04</td><td>• Used to test the zoom lens in the aging test mode.
• Test command 1 to 3 are repeated to test.</td><td></td></tr>
<tr><td>2</td><td>01</td><td>Used to test the action of the ADF and RADF. The aging test starts when the document presence sensor is manually turned on.</td><td></td></tr>
<tr><td></td><td>02</td><td>This is the test command used to test ADF/RADF sensors. On/off state of sensor can be manually tested.
The sensor to be tested can be selected using the keypad.
<table>
<tr><th>Keypad / Position</th><th>0</th><th>1</th><th>2</th></tr>
<tr><td>TPL (toner empty lamp)</td><td>Sensing presence of document
DSD</td><td>Sensing DF block open/close
AUOD</td><td>Sensing document width
DWS1</td></tr>
<tr><td>TNFL (full waste toner lamp)</td><td>Sensing pre-fed document
DFD</td><td>Sensing paper feed block open/close
FGOD</td><td>Sensing document width
DWS2</td></tr>
<tr><td>DVPL (developer maintenance lamp)</td><td>Sensing document release</td><td>Sensing paper inversion block open/close
TGOD</td><td>Sensing document width
DSW3</td></tr>
<tr><td>MENTEL (maintenance lamp)</td><td></td><td></td><td>Sensing document width
DSW4</td></tr>
<tr><td>JPL (misfeed lamp)</td><td>Sensing document width
DWS</td><td></td><td>Sensing document length
DLS1</td></tr>
<tr><td>PPL (paper empty lamp)</td><td></td><td></td><td>Sensing document length
DLS2</td></tr>
</table>
Lamp on: paper found/door open Lamp off: no paper found/door close</td><td></td></tr>
<tr><td></td><td>03 ~ 10
03</td><td>Used to test the action of ADF and RADF (individual load check)
Motor A forward rotation</td><td></td></tr>
<tr><td></td><td>04</td><td>Motor A revere rotation</td><td></td></tr>
<tr><td></td><td>05</td><td>Motor B forward rotation</td><td></td></tr>
<tr><td></td><td>06</td><td>Motor B revere rotation</td><td></td></tr>
<tr><td></td><td>07</td><td>Belt clutch (RADF only)</td><td></td></tr>
<tr><td></td><td>08</td><td>Paper feed solenoid (RADF only)</td><td></td></tr>
<tr><td></td><td>09</td><td>Inversion solenoid (RADF only)</td><td></td></tr>
<tr><td></td><td>10</td><td>Stopper solenoid</td><td></td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>3</td><td>02</td><td>This is the test command used to test a sensor of the sorter.
On/off state of sensor can be manually tested.
The sensor to test can be selected using the keypad.
<table>
<tr><th>Keypad / Position</th><th>0</th><th>1</th><th>2</th></tr>
<tr><td>TPL (toner empty lamp)</td><td>Sensing paper registration PES</td><td>Sensing indexer upper limit IULS</td><td>Sending sorter setup SJS</td></tr>
<tr><td>TNFL (full waste toner lamp)</td><td>Sensing paper release PWB-L/S</td><td>Index lower limit sense (ILLS) or Jogger (SF-S52) home sense (JHPS) (ILLS)</td><td>Sending top cover open/close UCSW</td></tr>
<tr><td>DVPL (developer maintenance lamp)</td><td>Sensing paper on tray (TPS)</td><td>Sensing indexer at home position IHS</td><td>Sensing blower cover open/close</td></tr>
<tr><td>MENTEL (maintenance lamp)</td><td>Sensing paper on stapler (SPS)</td><td>Bin home position sense (BPSW)</td><td>—</td></tr>
<tr><td>JPL (misfeed lamp)</td><td>—</td><td>—</td><td>Stapler home position sense (SHPS)</td></tr>
<tr><td>PPL (paper empty lamp)</td><td>Paper edge sense (PEGS)</td><td>—</td><td>Sending needle presence (NES)</td></tr>
</table>
Lamp on: paper found/door opened/ON
Lamp off: no paper found/door closed/OFF</td><td></td></tr>
<tr><td></td><td>03 ~ 08

03</td><td>Used to test the action of the sorter (individual load check).
Following action can be tested.
Transport motor rotation</td><td></td></tr>
<tr><td></td><td>04</td><td>Indexer motor rotation (returns to the home position at first, then stops at each bin location Bin 1 to Bin 21, moving up and down.</td><td></td></tr>
<tr><td></td><td>05</td><td>Fan motor rotation in the case of (SF-S15), Jogger motor (in the case of SF-S52)</td><td></td></tr>
<tr><td></td><td>06</td><td>Gate solenoid in the case of (SF-S15), Paper hold solenoid (in the case of SF-S52)</td><td></td></tr>
<tr><td></td><td>07</td><td>Offset solenoid (in the case of SF-S52)</td><td></td></tr>
<tr><td></td><td>08</td><td>Stapler motor rotation (the paper is stapled when there is a paper in the stapler tray).</td><td></td></tr>
<tr><td>4</td><td>02</td><td>This is the test command used to test sensor of the desk. On/off state of sensor can be manually tested.
The sensor to be tested can be selected using the keypad.
<table>
<tr><th>Keypad / Position</th><th>0</th><th>1</th><th>2</th></tr>
<tr><td>TPL (toner empty lamp)</td><td>Sensing paper fed from the upper cassette DPOD</td><td>Upper cassette lift upper limit sensor DLUD1</td><td>Sensing paper presence on the upper cassette DPE1</td></tr>
<tr><td>TNFL (full waste toner lamp)</td><td>Sensing paper fed from the middle cassette DPOD2</td><td>Middle cassette lift upper limit sensor DLUS2</td><td>Sensing paper presence on the middle cassette DPE2</td></tr>
<tr><td>DVPL (developer maintenance lamp)</td><td>Sensing paper fed from the bottom cassette DPOD3</td><td>Bottom cassette lift upper limit sensor DLUD3</td><td>Sensing paper presence on the bottom cassette DPE3</td></tr>
<tr><td>MENTEL (maintenance lamp)</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>JPL (misfeed lamp)</td><td>—</td><td>—</td><td>—</td></tr>
<tr><td>PPL (paper empty lamp)</td><td>Sensing door close/open DPOP</td><td>—</td><td>—</td></tr>
</table>
Lamp on: paper found/door opened/ON
Lamp off: no paper found/door closed/OFF</td><td></td></tr>
<tr><td></td><td>03</td><td>Used to test the on/off state of the first cassette size switch of the desk.
<table>
<tr><th>Cassette / Position</th><th>Cassette size switch</th></tr>
<tr><td>TPL (toner empty lamp)</td><td>CSSW1</td></tr>
<tr><td>TNFL (full waste toner lamp)</td><td>CSSW2</td></tr>
<tr><td>DVPL (developer maintenance lamp)</td><td>CSSW3</td></tr>
<tr><td>MENTEL (maintenance lamp)</td><td>CSSW4</td></tr>
<tr><td>JPL (misfeed lamp)</td><td>—</td></tr>
<tr><td>PPL (paper empty lamp)</td><td>—</td></tr>
</table></td><td></td></tr>
</table>

Main code	Sub code	Description	Ref. Page
4	03	(Cassette size board) 	
	04	Used to test the on/off state of the second cassette size switch of the desk. Function is identical to the test command 04-03.	
	05	Used to test the on/off state of the third cassette size switch of the desk. Function is identical to the test command 04-03.	
	06	Transport motor rotation of the desk	
	07	Off when detected the upper limit of the first cassette lift up motor of the desk.	
	08	Off when detected the upper limit of the second cassette lift up motor of the desk.	
	09	Off when detected the upper limit of the third cassette lift up motor of the desk.	
	10	Activate transport clutch of the desk	
	11	Activate first cassette paper feed solenoid of the desk	
	12	Activate paper feed clutch of the first cassette of the desk	
	13	Activate second cassette paper feed solenoid of the desk	
	14	Activate paper feed clutch of the second cassette of the desk	
	15	Activate third cassette paper feed solenoid of the desk	
	16	Activate paper feed clutch of the third cassette of the desk	
5	01	All LED's on the operation panel are turned on for five seconds.	
	02	This is the test command used to test the heater lamp. Heater lamp turned on and off five times.  The heater turns on and off in the order shown above.	
	03	This is the test command used to test the copy lamp. Copy lamp turned on in the following order. When the test command starts, the copy lamp turns full power for one second with the manual exposure setting 3.0 shown, and the copy lamp intensity can be changed to the power set on the exposure setup key for a period of 6.25 seconds.  * Refrain from repeating this test command without waiting for lamp and glass to cool.	
	04	This is the test command used to check activation of the discharge lamp (DL) and the blank lamps (BL). • The discharge lamp (DL) turns on for 30 seconds. • Each blank lamp starts to turn on from the front frame side to the rear frame side. Finally, all blank lamps turn on.	
6	02	Activation of the separation solenoid • Used to test the action of the drum separator pawl.	
7	01	◦ Aging test with alert for paper misfeed 1. Used to check the warmup time. 2. Executes the continuing aging test for the given number of copies. When the test command is executed. the machine performs its normal action and the warmup time starts to count from zero and increase count every 2 second. The count is displayed on the copy lamp window. When the RPL is turned on, the addition of the copy number is interrupted with the copy number remaining on display as it is. When the CLEAR key is pressed, the copy number must be entered on the keypad, and with depression of the PRINT switch, the given number of copies repeated to produce. In this case, the paper misfeed function comes alive.	
	02	◦ Aging test without alert for paper misfeed Aging test is done without feeding paper. This test command is similar to 7-1. But, it does not alert paper misfeed occurrence. The warmup time check is similar as the test command 21.	
	03	◦ Aging test without misfeed and fusing This test command is similar to 7-1. But, it does not count the warmup time and disregards the heater and paper feed troubles, without activating the heater lamp.	

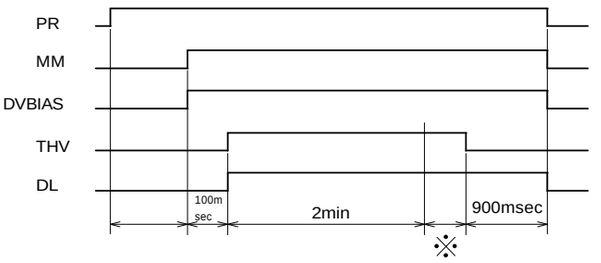
<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>7</td><td>04</td><td>◦ Warmup disabled
Machine action is checked disregarding the warmup time.
When the test command is executed, the RPL immediately turns on. Although the machine action may be tested, it may show the trouble status H4 depending on the case if low heater temperature is found.</td><td></td></tr>
<tr><td></td><td>06</td><td>◦ Intermittent aging test</td><td></td></tr>
<tr><td></td><td>07</td><td>◦ Intermittent aging test without alert for paper misfeed</td><td></td></tr>
<tr><td>8</td><td>01</td><td>Developing bias voltage output
This is the test command used to check the developing bias voltage. The developing bias voltage is turned on for 30 seconds.
Standard developing bias setting is –215VDC.</td><td>[7]-1(3)</td></tr>
<tr><td></td><td>02</td><td>Main (charge) corona output
Standard manual exposure mode main corona grid voltage is –730±15V.
This is the test command used to check the main corona variance between the front and rear sides. The corona output continues for 30 seconds.
• The main corona variance must be within 8µA between the front and the rear.</td><td>[7]-4-(3)</td></tr>
<tr><td></td><td>03</td><td>Main corona output
Standard photographic mode main corona grid voltage is –450±15V.</td><td>[7]-2-(3)</td></tr>
<tr><td></td><td>04</td><td>Main corona output
Standard TSM main corona grid voltage is –610V±15V.</td><td>[7]-2-(3)</td></tr>
<tr><td></td><td>06</td><td>Transfer corona output
This is the test command used to check the transfer corona output (THV). The transfer corona output continues for 30 seconds.
 

Standard transfer corona output is –31±5µA with variance between the front and rear at 8µA, maximum.</td><td>[7]-2-(3)</td></tr>
<tr><td></td><td>07</td><td>Separation corona output
This is the test command used to check the separation corona output (SHV). The separation corona output continues for 30 seconds.
 

Standard separation corona output is -10 to 10 Vdc (Japan).</td><td>[7]-2-(3)</td></tr>
<tr><td>9</td><td>02</td><td>ADU sensor check test command
<table><tr><th>Position</th><th>Sensor</th></tr><tr><td>TPL (toner empty lamp)</td><td>DPPD1</td></tr><tr><td>TNFL (full waste toner lamp)</td><td>DPPD2</td></tr><tr><td>DVPL (developer maintenance lamp)</td><td>DTPID</td></tr><tr><td>MENTEL (maintenance lamp)</td><td>PFD</td></tr><tr><td>JPL (misfeed lamp)</td><td>APHPS1</td></tr><tr><td>PPL (paper empty lamp)</td><td>APHPS2</td></tr></table></td><td></td></tr>
<tr><td></td><td>03</td><td>ADU rear plate drive motor rotation
• Used to check the rear end plate movement
(AB series)
HP.A3 → B4 → A4R → B5R → A4 → B5 → A5 →
(Inch series)
HP.11" x 17" → 11" x 14" → 8 1/2" x 11"(R) → 8 1/2" x 11" →</td><td></td></tr>
<tr><td></td><td>04</td><td>ADU alignment plate drive motor rotation
• Used check the alignment plate movement
(AB series)
HP.A3 → B4 → A4R → B5R → A4 → B5 → A5 →
(Inch series)
HP.11" x 17" → 11" x 14" → 8 1/2" x 11"(R) → 8 1/2" x 11" →</td><td></td></tr>
</table>

Main code	Sub code	Description	Ref. Page
9	05	Gate solenoid activation Used to check the gate solenoid movement	
10	—	Toner motor activation Used to check the toner motor activation.	
14	—	Trouble cancellation This is the test command used to cancel other than the "U2" trouble (H2, H3, H4). After the trouble has been removed, the test command terminates.	
16	—	U2 trouble cancellation This is the test command used to cancel the "U2" trouble. After the trouble has been removed, the test command terminates.	
20	—	Maintenance counter clear Used to reset the maintenance preset counter to zero after the maintenance is completed. It is mandatory to clear the counter after the maintenance is over.	
21	01	◦ Maintenance cycle setting Used to set the maintenance cycle. Code Maintenance cycle 0 ····· 80,000 sheets 1 ····· 5,000 sheets 2 ····· 10,000 sheets 3 ····· 20,000 sheets 4 ····· 40,000 sheets 5 ····· None The default is 0.	
	02	◦ Maintenance setup (Japan only) • Mini-maintenance setup for the black copy kit The following procedure is required. As the PAUSE lamp comes active and the number already set (1 or 2) is displayed. In this occasion, enter the required mini-maintenance cycle on the keypad and press the PRINT switch. Code Maintenance cycle 0 ····· 80,000 sheets 1 ····· 5,000 sheets 2 ····· 10,000 sheets Default is set to 5,000 sheets ("1") of the black copy.	
	03	◦ Mini-maintenance setup (Japan only) • Mini-maintenance setup for color copy kit The COPY and the COLOR TONER lamps come active with the presently set figure (1) displayed. Enter the required mini-maintenance cycle on the keypad and press the PRINT switch. Code Mini-maintenance cycle 0 ····· 10,000 sheets 1 ····· 5,000 sheets * The code "1" needs to be entered because the color copy kit is a 5,000 sheets kit. Default is set to 5,000 sheet ("1") of the color copy.	
22	01	◦ Maintenance counter display Copy number of the maintenance counter is displayed. The contents of the counter is displayed on the copy number window in three segments, each segment consisting of a two-digit number. 	
	02	◦ Maintenance preset counter display This test command is used to check the contents of the maintenance preset counter. It is displayed in the same way as the test command 22-1.	
	03	◦ Paper misfeed map display	
	04	◦ Total misfeed counter display	
	05	◦ Total counter display This counter is used to show the total copy number of the machine. • It is displayed in the same way as the test command 22-1.	

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>22</td><td>06</td><td>◦ Developer counter display
The contents of the copy number counter of the installed developing unit is displayed.
• It is displayed in the same way as the test command 22-1.
• The color of the developing unit is displayed by a combination of the maintenance lamp (MENTEL), full waste toner lamp (TNFL), and the developer maintenance lamp (DVPL), while the developing unit is operating.
<table><tr><th>Color</th><th>TNFL</th><th>DVPL</th><th>MENTEL</th></tr><tr><td>Black</td><td>F</td><td>×</td><td>×</td></tr><tr><td>Red</td><td>×</td><td>F</td><td>×</td></tr><tr><td>Blue</td><td>F</td><td>F</td><td>×</td></tr></table>F ··· ON
× ··· OFF</td><td></td></tr>
<tr><td></td><td>07</td><td>◦ Developer preset counter display
Number of developer replacements and the reset counter contents of the installed developing unit are displayed.
• It is displayed in the same way as the test command 22-1.
• Color of the installed developing unit is the same as the test command 22-6.</td><td></td></tr>
<tr><td></td><td>08</td><td>◦ ADF/RADF counter display
Used to check the number of originals fed through the ADF or RADF.
It is displayed in the same way as the test command 22-1.</td><td></td></tr>
<tr><td></td><td>09</td><td>◦ Duplex counter display
Used to check the number of sheets fed through the duplex unit.
It is displayed in the same way as the test command 22-1.</td><td></td></tr>
<tr><td>24</td><td>01</td><td>◦ Misfeed map memory and total misfeed counter clear</td><td></td></tr>
<tr><td></td><td>03</td><td>◦ ADF/RADF counter clear
The contents of the copy number counter is reset for the ADF/RADF.
It is mandatory to clear the memory contents after the maintenance is over.</td><td></td></tr>
<tr><td></td><td>04</td><td>◦ Duplex counter clear
The contents of the copy number counter is reset to the duplex unit.
It is mandatory to clear the memory contents after the maintenance is over.</td><td></td></tr>
<tr><td>25</td><td>01</td><td>Main motor activation
• Used to check malfunction in the main motor drive train.
• Also, monitors the toner density sensor.
(Procedure)

Monitors the toner sensor of the black developing unit. (To check the sensor)
C → =↵ → 0 → =↵ → 2 → 5 → PSW → 1 → PSW</td><td></td></tr>
<tr><td></td><td>02</td><td>Automatic developer referance setting
• This is the test command used to monitor the toner sensor and to automatically adjust the developer.
• For the automatic developer adjustment, the developing tank is stirred and the toner sensor output is monitored. The sensor is monitored for 16 times in 2 minutes after the stirring started and their mean value is stored in the memory as the toner density adjust value. (See the area marked with an asterisk in the figure below.) (Afterwards, referance changes as copies are made to maintain density.)
 

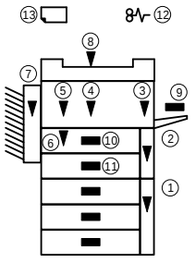
(Procedure)
C → =↵ → 0 → =↵ → 2 → 5 → PSW → 2 → PSW</td><td></td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>26</td><td>01</td><td>
Option unit setup
• Used to set up option unit.
1 When the test command is executed, the presently stored machine setup code is displayed with the READY lamp turned on.
2 After the READY lamp has turned on, enter an appropriate setup code on the keypad and press the PRINT switch. Then, the date is stored in the memory and the READY lamp turns off.
<table>
<tr><th>Option</th><th>Code</th><th></th></tr>
<tr><td>RADF/ADF</td><td>1</td><td rowspan="4">(Automatic setup)</td></tr>
<tr><td>ADU</td><td>(2)</td></tr>
<tr><td>Desk</td><td>4</td></tr>
<tr><td>Sorter (three types)</td><td>10</td></tr>
</table>
◦ Used to set the code that corresponds to an option unit.
(EX): To set the RADF together with ADU, enter "5" (1+4=5). "7" is on display.
NOTES:
(1) Be sure to enter the code that corresponds to the installed option unit.
(2) If an option unit not corresponding may result in a trouble. See the trouble code chart.
</td><td></td></tr>
<tr><td></td><td>03</td><td>
Timer auto clear (yes/no) and counter mode setup
1 When the test command is executed, the code of the presently stored mode is displayed with the READY lamp turned on.
2 After the READY lamp has turned on, enter an appropriate setup code on the keypad and press the PRINT switch. Then, the code is stored in the memory and the READY lamp turns off.
<table>
<tr><th>Setup code</th><th>Timer auto clear</th><th>Total counter (single/double count)</th><th>Maintenance counter (single/double count)</th></tr>
<tr><td>0</td><td>F</td><td>Double count</td><td>Double count</td></tr>
<tr><td>1</td><td>F</td><td>Single count</td><td>Double count</td></tr>
<tr><td>2</td><td>F</td><td>Double count</td><td>Single count</td></tr>
<tr><td>3</td><td>F</td><td>Single count</td><td>Single count</td></tr>
<tr><td>40</td><td>×</td><td>Double count</td><td>Double count</td></tr>
<tr><td>41</td><td>×</td><td>Single count</td><td>Double count</td></tr>
<tr><td>42</td><td>×</td><td>Double count</td><td>Single count</td></tr>
<tr><td>43</td><td>×</td><td>Single count</td><td>Single count</td></tr>
</table>
</td><td></td></tr>
<tr><td></td><td>06</td><td>
Destination setup
Used to set the model number and destination.
1 When the test command is executed, the presently stored model number and the destination code are displayed (see table below) and the READY lamp turns on.
2 After the READY lamp has turned on, enter the model number and the destination code on the keypad and press the PRINT switch to store the setting in the memory. The READY lamp then turns off.
<table>
<tr><th>Destination
Model</th><th>Japan</th><th>U.K. (SUK)</th><th>Export AB series machine except U.K.</th><th>U.S.A. (SEC)</th><th>Inch series machine except U.S.A.</th></tr>
<tr><td>SF-2027</td><td>4</td><td>1</td><td>5</td><td>6</td><td>7</td></tr>
<tr><td>SF-2022</td><td>14</td><td>11</td><td>15</td><td>16</td><td>17</td></tr>
</table>
If 20 is added to the destination code, loading of a developing unit other than black is disregarded and "CH" displayed.
Automatic paper selection function setup
Automatic paper selection/manual selection (only for the export version SF-2022 equipped with ADF/RADF)
<table>
<tr><th></th><th>Initial selection</th><th>When in timeout CA</th><th>When document presents in RADF/ADF</th><th></th></tr>
<tr><td rowspan="2">SF-2022 (export version)</td><td>Mode-1 (APS mode)</td><td>MAN</td><td>APS</td><td>APS only when ADF/RADF used</td></tr>
<tr><td>Mode-2 (Man mode)</td><td>MAN</td><td>MAN</td><td></td></tr>
<tr><td rowspan="2">SF-2022 (Japan) and SF-2027</td><td>Mode- (APS mode)</td><td>APS</td><td>APS</td><td></td></tr>
<tr><td>Mode-2 (Man mode)</td><td>MAN</td><td>MAN</td><td></td></tr>
</table>
It can be switched to the mode-2 when 40 is added to the given destination code.
</td><td></td></tr>
</table>

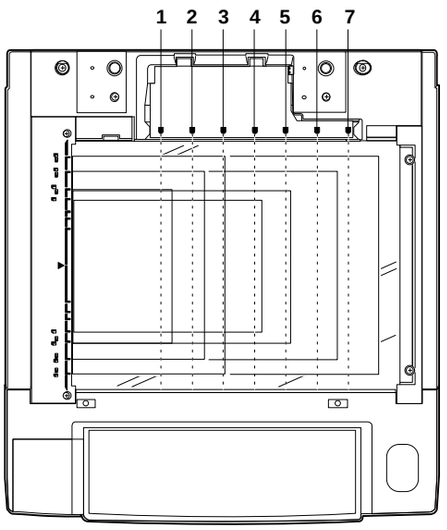
<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>26</td><td>07</td><td>Drum sensitivity setup
1 When the test command is executed, the number stored in the memory is recalled and the READY lamp turns on.
2 A number 1 to 3 may be entered on the keypad while the RPL is active.
3 Press the PRINT switch after the number has been entered. With this, the READY lamp turns off and the test command number is displayed. Now, this is all needed for the setup.
° Drum
<table><tr><td>Keypad entry</td><td>1</td><td>2</td><td>3</td></tr><tr><td>Sensitivity</td><td>1</td><td>2</td><td>3</td></tr></table>
Input of the zoom position shift correction value (26-08, 26-09)</td><td></td></tr>
<tr><td></td><td>08</td><td>Lens characteristics entry (at a time of lens replacement)
For each lens has a variance in its focal distance, the lens moving distance in any zoom mode must correspond with the focal distance of the lens. The zoom ratio varies proportionate to the variance of the lens focal distance.
To avoid problem, the class of the lens focal distance refer to chart next) is stored in the memory using the test command. In a variable zoom mode, the lens moving distance that corresponds to the lens focal distance is obtained on the basis of the data so as to produce the accurate zoom copy.
Setup method (26-08)
1 When the test command is executed, the presently stored preset code is displayed and the READY lamp turns on.
2 After the READY lamp turned on, enter the lens number shown on the lens upper area and press the PRINT switch to store the preset value in the memory. The READY lamp now turns off.
[C] → [=↵] → [0/◊] → [=↵] → [2] → [6] → [PSW] → [8] → [PSW] → [1]
→ [4] → [PSW] (Setting)</td><td>[7]-3-(6)</td></tr>
<tr><td></td><td>09</td><td>4/5 mirror characteristics entry (at a time of lens replacement)
(Setup method (26-09)
1 Set the correction value for lens marked value based on "lens value vs. test command input."
Press [C] → [=↵] → [0/◊] → [=↵] → [2] → [6] → [PSW] → [9] → [PSW] keys to execute the test command 26-09.
As the READY lamp turns on, the previously set value 1 to 21) is shown.
2 Enter the new value on the keypad.
EX: If the value shown on the lens is +1, 2, pick up "14."
Press the [1] → [4] → [PSW] keys.
A figure 0 to L is shown on the lens value label.
(Label)
82525
No. 114191
O-L
+1.2
<table><tr><th>Value shown on the label</th><th>Test command 48-01</th><th>Test command 48-01 [=↵]</th><th>Test command 26-09 Zoom correction (No.4/5 mirror)</th><th>Test command 26-08 Zoom correction (lens)</th></tr><tr><td>+4.0</td><td>10</td><td>20</td><td rowspan="3">21</td><td rowspan="3">21</td></tr><tr><td>3.9</td><td>11</td><td>21</td></tr><tr><td>3.8</td><td>12</td><td>22</td></tr><tr><td>3.7</td><td>13</td><td>22</td><td rowspan="4">20</td><td rowspan="4">20</td></tr><tr><td>3.6</td><td>14</td><td>22</td></tr><tr><td>3.5</td><td>15</td><td>23</td></tr><tr><td>3.4</td><td>16</td><td>23</td></tr><tr><td>3.3</td><td>17</td><td>24</td><td rowspan="4">19</td><td rowspan="4">19</td></tr><tr><td>3.2</td><td>18</td><td>24</td></tr><tr><td>3.1</td><td>19</td><td>25</td></tr><tr><td>3.0</td><td>20</td><td>25</td></tr></table></td><td>[7]-3-(6)</td></tr>
</table>

Main code	Sub code	Description	Ref. Page
26	09		

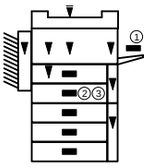
Value shown on the label	Test command 48-01	Test command 48-01 =↵	Test command 26-09 Zoom correction (No.4/5 mirror)	Test command 26-08 Zoom correction (lens)
2.9	21	26	18	18
2.8	22	26		
2.7	23	27		
2.6	24	27		
2.5	25	28	17	17
2.4	26	28		
2.3	27	29		
2.2	28	29		
2.1	29	30	16	16
2.0	30	30		
1.9	31	31		
1.8	32	31		
1.7	33	32	15	15
1.6	34	32		
1.5	35	33		
1.4	36	33		
1.3	37	34	14	14
1.2	38	34		
1.1	39	35		
1.0	40	35		
0.9	41	36	13	13
0.8	42	36		
0.7	43	37		
0.6	44	37		
0.5	45	38	12	12
0.4	46	38		
0.3	47	39		
0.2	48	39		
+0.1	49	40	11	11
0	50	40		
–0.1	51	40		
0.2	52	41	10	10
0.3	53	41		
0.4	54	42		
0.5	55	42		
0.6	56	43	9	9
0.7	57	43		
0.8	58	44		
0.9	59	44		
1.0	60	45	8	8
1.1	61	45		
1.2	62	46		
1.3	63	46		
1.4	64	47	7	7
1.5	65	47		
1.6	66	48		
1.7	67	48		
1.8	68	49	6	6
1.9	69	49		
2.0	70	50		
2.1	71	50		

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Value shown on the label</th><th>Test command 48-01</th><th>Test command 48-01 =↵</th><th>Test command 26-09 Zoom correction (No.4/5 mirror)</th><th>Test command 26-08 Zoom correction (lens)</th></tr>
<tr><td>2.2</td><td>72</td><td>51</td><td rowspan="4">5</td><td rowspan="4">5</td></tr>
<tr><td>2.3</td><td>73</td><td>51</td></tr>
<tr><td>2.4</td><td>74</td><td>52</td></tr>
<tr><td>2.5</td><td>75</td><td>52</td></tr>
<tr><td>2.6</td><td>76</td><td>53</td><td rowspan="4">4</td><td rowspan="4">4</td></tr>
<tr><td>2.7</td><td>77</td><td>53</td></tr>
<tr><td>2.8</td><td>78</td><td>54</td></tr>
<tr><td>2.9</td><td>79</td><td>54</td></tr>
<tr><td>3.0</td><td>80</td><td>55</td><td rowspan="4">3</td><td rowspan="4">3</td></tr>
<tr><td>3.1</td><td>81</td><td>55</td></tr>
<tr><td>3.2</td><td>82</td><td>56</td></tr>
<tr><td>3.3</td><td>83</td><td>56</td></tr>
<tr><td>3.4</td><td>84</td><td>57</td><td rowspan="4">2</td><td rowspan="4">2</td></tr>
<tr><td>3.5</td><td>85</td><td>57</td></tr>
<tr><td>3.6</td><td>86</td><td>58</td></tr>
<tr><td>3.7</td><td>87</td><td>58</td></tr>
<tr><td>3.8</td><td>88</td><td>59</td><td rowspan="3">1</td><td rowspan="3">1</td></tr>
<tr><td>3.9</td><td>89</td><td>59</td></tr>
<tr><td>–4.0</td><td>90</td><td>60</td></tr>
</table>
(Lens value input vs. test command input)
</td><td></td></tr>
<tr><td>26</td><td>11</td><td>Time out clear period setup
Possible to set between 1 and 99 seconds (default at 60 seconds).</td><td></td></tr>
<tr><td>30</td><td>01</td><td>Monitoring main unit paper sensor
Used to check the on/off state of paper sensor within the copier using the misfeed lamp and the paper feed location lamp.
 

<table>
<tr><th>Location Marking</th><th>Sensor</th></tr>
<tr><td>1 JL1</td><td>PID</td></tr>
<tr><td>2 JL2</td><td>PPD1</td></tr>
<tr><td>3 JL3</td><td>PPD2</td></tr>
<tr><td>4 JL4</td><td>PSD</td></tr>
<tr><td>5 JL5</td><td>POD</td></tr>
<tr><td>6 JL6</td><td>—</td></tr>
<tr><td>7 JL7</td><td>—</td></tr>
<tr><td>8 JL8</td><td>—</td></tr>
<tr><td>9 CSL1</td><td>PED1</td></tr>
<tr><td>F CSL2</td><td>PED2</td></tr>
<tr><td>G CSL3</td><td>PED3</td></tr>
<tr><td>H JPL</td><td>LUD1</td></tr>
<tr><td>I PPL</td><td>LUD2</td></tr>
</table></td><td></td></tr>
<tr><td></td><td>02</td><td>Monitoring paper cassette size
Used to check the on/off state of paper cassette size.
<table>
<tr><th>Position \ Cassette</th><th>Cassette feed</th></tr>
<tr><td>TPL (toner empty lamp)</td><td>CSSW1</td></tr>
<tr><td>TNFL (full waste toner lamp)</td><td>CSSW2</td></tr>
<tr><td>DVPL (developer maintenance lamp)</td><td>CSSW3</td></tr>
<tr><td>MENTEL (maintenance lamp)</td><td>CSSW4</td></tr>
<tr><td>JPL (misfeed lamp)</td><td>—</td></tr>
<tr><td>PPL (paper empty lamp)</td><td>—</td></tr>
</table></td><td></td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>41</td><td>01</td><td>Document size photosensor check
The length of the document is sensed by way of the sensor beam interrupt method. All document size lamps and automatic paper selection lamps turn on. When the beam from the sensor LED PWB is interrupted, the corresponding document size lamp turns off.
* See the chart below for the location of photosensor.
<table><tr><th>Axis</th><th>Japan AB series</th><th>Export AB series</th><th>Export inch series</th></tr><tr><td>1</td><td>—</td><td>A5</td><td>INV</td></tr><tr><td>2</td><td>B5</td><td>A4</td><td>LT</td></tr><tr><td>3</td><td>A4</td><td>—</td><td>—</td></tr><tr><td>4</td><td>B5R</td><td>A4R</td><td>11" x 8½" (R)</td></tr><tr><td>5</td><td>AR4</td><td>—</td><td>—</td></tr><tr><td>6</td><td>B4</td><td>B4</td><td>11" x 14"</td></tr><tr><td>7</td><td>A3</td><td>A3</td><td>11" x 17"</td></tr></table></td><td>[7]-4-(1)</td></tr>
<tr><td>41</td><td>01</td><td>• The automatic paper selection lamp turns on when the original cover is open and turns off when the cover is closed.
• When closing of the original cover is sensed, all document size lamps turn off.
  </td><td>[7]-4-(1)</td></tr>
<tr><td></td><td>02</td><td>Document size photosensor setup</td><td>[7]-4-(2)</td></tr>
<tr><td></td><td>03</td><td>○ Document sensor beam receiving level and setup level
Used to check the document sensor level.
1. Receiving level display mode
• The receiving level when the test command is in execution is displayed on the copy number window.
• As the number corresponding to a sensor is entered on the keypad after the execution of the test command, the respective document size lamp turns on to show the sensor beam receiving level.
• The automatic paper selection lamp is employed to check open/close of the original cover; ON when open, and OFF when closed.
In the case of 1 above, the sensor level is fixed to the previous setting, when the original cover is closed.
• Setup level display mode
[C] → [=↵] → [0] → [=↵] → [2] → [5] → [PSW] → [1] → [PSW] → [Auto image select key]
With the above operation, the PAUSE lamp turns on.
• Level of each sensor set by way of the test command 41-2 is displayed on the copy number window.
• As a figure corresponding to a sensor is entered on the keypad after the test command has been executed, the respective document size lamp turns off to show the level set for the sensor.</td><td>[7]-4-(2)</td></tr>
<tr><td>42</td><td>*</td><td>○ Developer counter clear
Reset the contents of the copy number counter of the installed developing unit.
• The counter contents displayed in the same manner as the test command 22-1.
• The color of the installed developing unit is similar as the test command 22-6.
NOTE: It is effective for the developer color installed. If the developing unit has not been installed, the test command would not operate.</td><td></td></tr>
</table>

Main code	Sub code	Description	Ref. Page
43	*	◦ Fuser temperature setup Used to set the fuser temperature. When the test command is executed, the low two digits of the currently programmed fuser temperature is shown (ex: 75=175C). When the zoom select key is pressed here, the fuser temperature setting can be changed in increments of 5C. Press the PRINT switch to set. (Japan) 80 → 60 → 65 → 70 → 75 → 85 → 90 (Except SEC) 90 → 85 → 95 → 00 → 05 (SEC) 90 → 75 → 80 → 85 → 95 → 00 → 05	
46	01	◦ Exposure level adjustment Used to adjust the copy density and the copy density select level.	[7]-5-(5)
47	*	◦ AE sensor characteristics measurement AE sensor output characteristics memory (1) AE sensor output characteristics input Press the [C] → [=↵] → [0] → [=↵] → [4] → [7] → [PSW] keys. The mirror base is initialized, scans about 10cm, then stops. The READY lamp turns on now and becomes ready to measure. Press the PRINT switch. The copy lamp driving voltage changes in increments of 5V (10V) each from 80V (160V) to 55V (110V), and the AE sensor output characteristics is stored in the memory against copy intensity variation for the original. NOTE: Shown in parenthesis is for the 200V series machine.	[7]-5-(2)
48	01	Front/rear direction zoom ratio adjustment (refer to the test command 26-9 for the lens type value. Used to set the No.4/5 mirror home position (focal adjustment) and to adjust the zoom ratio of the copy in the vertical direction (from front to rear). There are two kinds of test command 48 of which procedure are described as follows. 1-1. Vertical copy zoom ratio standard value input method (at a time the lens or main PWB replacement0 Press the [C] → [=↵] → [0] → [=↵] → [4] → [8] → [PSW] → [=↵] keys. The already set value or "40" is displayed on the copy number window. Substitute the value of "O.L" shown on the label attached to the lens with the next formula to obtain the value. 40 – [(value of O.L.(x 5] = standard value of correction Ex: 40 – (+1.2 x 5) = 34 1-2. Use this test command to adjust the horizontal zoom ratio. Change the value entered in "1-1" to change. 2-1. No.4/4 mirror home position standard value input (at a time of lens or main PWB replacement). Press the [C] → [=↵] → [0] → [=↵] → [4] → [8] → [PSW] [1] → [PSW] keys. The already stored value or "50" is displayed. Substitute the value of "O.L" shown on the label attached to the lens with the next formula to obtain the value. 50 – [(O.L value) x 10] = standard value of correction Ex: 50 – (+1.2 x 10) = 38 2-2. To adjust the resolution, change the value entered at "2-1" using this test command. (Label) 82525 No. 114191 O-L +1.2	[7]-3-(1) -(3) [7]-3-(2) -(4)
	02	◦ Paper moving direction zoom adjustment Used to adjust the zoom ratio in the landscape mode. Varying the mirror base moving speed adjusts the zoom factor in the landscape direction of the copy (paper moving direction). Adjusting method 1 Place a scale over the original table in the direction the paper moves. Make a copy in the 100% zoom mode and obtain the copy zoom ratio correction factor. Copy zoom correction factor = (original size) – $\frac{\text{(copy image size)}}{\text{(original size)}} \times 100\%$ 2 Do the test command 49. As the READY lamp turns on, the previously set figure between 5 and 35 is displayed. Change it with the copy zoom factor correction factor obtained in 1 . (Input value) = (previously stored value) + copy zoom ratio correction factor [%] × 10 Press the PRINT switch after entering the input value. With this, the input value is stored in the memory and the READY lamp turns off.	[7]-3-(5)

Main code	Sub code	Description	Ref. Page
50	1	Used to adjust the copy lead edge image loss and void areas. For more information, refer to the optical system copy lead edge adjustment procedure.	[7]-3-(11)
	2	The function of this test command is similar to the test command 50-01. The test command 50-02 allows easier lead edge adjustment using the values of L1 and L2. For more information, refer to the optical system copy lead edge adjustment procedure.	[7]-3-(11)
51	02	◦ Resist roller adjustments Used to set the on timing of the paper feed roller (rate of buckle in the paper caused by the resist roller). When the test command is executed, the manual feed mode is automatically established. Change the manual feed mode resisting rate, cassette paper feed resist rate, and ADU paper feed resist rate.  Press the [C] → [=↵] → [0/◊] → [=↵] → [5] → [1] → [PSW] → [2] → [PSW] → keys. The manual feed lamp turns on → 1 Enter number → press the cassette key (main unit bottom cassette and pause lamp turn on) → 2 enter number → press the cassette key (main unit bottom cassette lamp turns on) → 3 enter number → press the cassette key. 1 : Manual feed paper resist rate adjustment 2 : Cassette paper resist rate adjustment 3 : ADU paper resist rate adjustment	[7]-2-(2)
	05	◦ Frame delete rate adjustment (copy moving direction only) Used to set the frame delete rate. • When the test command is executed, the READY lamp turns on, and the figure previously stored is displayed on the copy number window. Now, it becomes ready to accept a number between 1 and 19 on the keypad. When the PRINT switch is pressed after the entry, the number is stored in the memory and the READY lamp turns off. A single rate deletes the frame of about 1.0mm. The standard value has been set to "6."	[7]-2-(2)
52	01	◦ ADU alignment plate adjust value setup Used to adjust the home position of the ADU alignment plate. When the test command is executed, the READY lamp turns on. Enter a new value as the previously set value came displayed, and press the PRINT switch to stored it in the memory. It can be adjustable from 0 to 15. The default is 7. Setting a smaller value increases the width of the alignment plate and vice versa.	
	02	◦ ADU rear plate adjust value setup Used to adjust the home position of the ADU rear plate. When the test command is executed, the READY lamp turns on. Enter a new value as the previously set value came displayed, and press the PRINT switch to stored it in the memory. It can be adjustable from 0 to 99. Setting a smaller value increases the width of the rear plate and vice versa.	
	03	ADU drive clutch off time setup Can be set to any number between 0 and 10 in increments of 10ms each (default: 4). 0 = 30ms 1 = 0ms ····· 4 = 30ms ····· 10 = 90ms Setting a smaller value shortens the ADU clutch off timings and decreases the enforced curling rate of paper.	
53	01	◦ RADF and ADF stop position adjustment value setup (plain paper copied on one side) Used to adjust the RADF stop position for the single side copy of plain paper. When the test command is executed, the READY lamp turns on. Enter a new value as the previously set value came displayed, and press the PRINT switch to stored it in the memory. It can be adjustable from 0 to 15.	
	02	◦ RADF stop position adjustment setup (for double side copy on plain paper) Used to adjust the RADF stop position in the double side copy of plain paper. When the test command is executed, the READY lamp turns on. Enter a new value as the previously set value came displayed, and press the PRINT switch to stored it in the memory. It can be adjustable from 0 to 15.	
	03	◦ RADF and ADF stop position adjustment setup (light paper) Used to adjust the RADF stop position for light paper. When the test command is executed, the READY lamp turns on. Enter a new value as the previously set value came displayed, and press the PRINT switch to stored it in the memory. It can be adjustable from 0 to 15.	
	04	◦ RADF and ADF resist sensor adjustment Used to adjust the RADF resist sensor. (For ADF, adjust the lens sensor and the passing width sensor.) When the test command is executed, the RADF resist sensor is adjusted and its value is displayed.	
	05	◦ RADF and ADF eject sensor adjustment Used to adjust the RADF eject sensor. When the test command is executed, the RADF eject sensor is adjusted and its value is displayed.	

Trouble status display

Trouble status code	Subordinate code	Description
U3	20	Mirror motor lock detection
	21	Mirror motor MHPS error detection
L4	01	Main lock detection
L5	03	No.4/5 mirror motor error detection
	04	No.4/5 mirror motor MHPS error detection
	05	Lens motor error detection
	06	Lens motor LHPS error detection
L8	01	Power supply line frequency error detection
H2		Open thermistor
H3		Heat roller high temperature detection
H4		Heat roller low temperature detection
U2		Counter sumcheck error detection
U4	02	ADU alignment plate malfunction detected
	04	ADU rear plate malfunction detected
U5	00	ADF communication trouble detected
	01	A motor malfunction detected
	02	B motor malfunction detected
	03	Resist sensor malfunction detected
	04	Eject sensor malfunction detected
EE	EL	Auto developer adjustment (overtoned)
	EU	Auto developer adjustment (undertoned)
F3	12	Main unit upper cassette liftup motor trouble detected
	22	Main unit bottom cassette liftup motor trouble detected
U6	00	Desk communication trouble detected
	01	Desk-1 cassette liftup motor trouble detected
	02	Desk-2 cassette liftup motor trouble detected
	03	Desk-3 cassette liftup motor trouble detected
	08	Desk 24V line error detected
	09	LCC motor overcurrent detected
	10	Desk transport motor trouble detected
F1	00	Sorter communication trouble detected
	01	Paper jog malfunction detected
	02	Transport motor malfunction detected
	04	Indexer lower limit detected
	05	Indexer upper limit detected
	06	Shift motor malfunction detected
F2	02	Toner motor malfunction detected

[9] Maintenance and Miscellaneous

1. Maintenance Schedule

SF-2022 and 2027 : every 80,000 sheets of paper
<Remarks>
★ = lubrication F = cleaning v = adjustment b = replacement/mounting k = repositioning X = check(cleaning, replacement and/or adjustment, if necessary)

* The maintenance schedule of the multi-cassette paper feed unit is based on the value indicated by the machine counter.

Section	Part	Timing						
		Installation	Service call	80K	160K	240K	320K	Notes
Developing section	Developer (black)	b		b	b	b	b	
	Toner cartridge	b						
	Developer(mono-color)							
	Toner cartridge							
	DV seal				b		b	
Around the drum	Drum	(b)		b	b	b	b	
	Blade			b	b	b	b	
	Toner receiving seal			X	b	X	b	
	Separating claw			b	b	b	b	
	Electrostatic charge plate unit			b	b	b	b	
	MC case		F	F	F	F	F	
	Screen grid		F (X)	b	b	b	b	
	TC wire		F (X)	b	b	b	b	
	TC case		F	F	F	F	F	
	BL/DL lamp		F	F	F	F	F	
	Run-down toner bottle							
Suction section	Suction belt		F (X)	F	F	F	F	
	Ozone filter			b	b	b	b	
Fusing section	Upper heat roller			F	b	F	b	
	Gear for upper heat roller			★	b	★	b	
	Lower heat roller			F	b	F	b	
	Upper separating claw			b	b	b	b	
	Lower separating claw			b	b	b	b	
	Upper cleaning roller	b		b	b	b	b	
	Thermistor			F	F	F	F	
	Various gearing			★	★	★	★	
Optical section	Mirror/lens/reflector/filter		F	F	F	F	F	
	Driving wire			X	X	X	X	
	Optical rail			★	★	★	★	
	Sensing devices		F	F	F	F	F	
	Original glass plate/original cover	F	F	F	F	F		
Paper feeding section	Various rollers (hand feed, 500-sheet cassette, ADU)		F	F	F	F	F	
	Torque limiter (hand feed, 500-sheet cassette, ADU)		X	X	X	X	X	
	500-Sheet cassette brake spring (paper feed unit)		F	F	F	F	F	

2. Counters and Simulations Related to Maintenance

(1) List of counters and simulations related to maintenance

<table>
<tr><th rowspan="2">Function</th><th colspan="2">Simulation</th><th>Description</th></tr>
<tr><th>Main code</th><th>Sub code</th><th></th></tr>
<tr><td>Clear the maintenance counter</td><td>20</td><td>*</td><td>The contents of the preset counter are cleared to zero.</td></tr>
<tr><td>Set the maintenance cycle</td><td rowspan="3">21</td><td>1</td><td>Code Maintenance cycle
0 ..... 80,000 sheets
1 5,000
2 10,000
3 20,000
4 ..... 40,000 sheets
5 ..... free</td></tr>
<tr><td>Set the mini-maintenance
(Japan only)</td><td>2</td><td>• For black copy kit
Code Maintenance cycle
0 ..... 80,000 sheets
1 ..... 5,000 sheets
2 ..... 10,000 sheets</td></tr>
<tr><td></td><td>3</td><td>• For color copy kit
Code Maintenance cycle
0 ..... 10,000 sheets
1 ..... 5,000 sheets</td></tr>
<tr><td>Display the maintenance count</td><td rowspan="9">22</td><td>1</td><td>The copy quantity stored in the maintenance counter is displayed.</td></tr>
<tr><td>Display the maintenance preset count</td><td>2</td><td>The contents of the preset counter are displayed.</td></tr>
<tr><td>Display the jam map</td><td>3</td><td></td></tr>
<tr><td>Display the total jam count</td><td>4</td><td></td></tr>
<tr><td>Display the total count</td><td>5</td><td>The total copy quantity is displayed.</td></tr>
<tr><td>Display the developer count</td><td>6</td><td>The number of sheets copied using the currently mounted developing unit is displayed.
<table><tr><th>Color</th><th>TNFL</th><th>DVPL</th><th>MENTEL</th></tr><tr><td>black</td><td>F</td><td>X</td><td>X</td></tr><tr><td>red</td><td>X</td><td>F</td><td>X</td></tr><tr><td>blue</td><td>F</td><td>F</td><td>X</td></tr></table>F : ON
X: OFF</td></tr>
<tr><td>Display the developer preset count</td><td>7</td><td>The contents of the developer exchange quantity preset counter are displayed.</td></tr>
<tr><td>Display the ADF/RADF count</td><td>8</td><td>Used number of ADF/RADF is displayed.</td></tr>
<tr><td>Display the duplex count</td><td>9</td><td>The quantity used by the duplex unit is displayed.</td></tr>
<tr><td>Clear the jam memory and total jam counter</td><td rowspan="3">24</td><td>1</td><td>The contents of the jam memory and total jam counter are cleared to zero.</td></tr>
<tr><td>Clear the ADF/RADF count</td><td>3</td><td>The contents of the ADF/RADF copy quantity counter are cleared to zero.</td></tr>
<tr><td>Clear the duplex count</td><td>4</td><td>The contents of the duplex unit copy counter are cleared to zero.</td></tr>
<tr><td>Clear the developer count</td><td>42</td><td>*</td><td>The contents of the developer counter are cleared to zero.</td></tr>
</table>

(2) Maintenance Indication

1	Toner empty	When the color toner indication is OFF, the empty status of the black toner is detected. When the color toner indication is ON, the empty status of the color toner is detected.
2	Developer	When the color toner indication is OFF, the status of the consumed black developer is indicated. When the color toner indication is ON, the status of the consumed color developer is indicated.
3	Waste toner bottle full	No space in the waste toner bottle is indicated.
4	Maintenance	According to the cycle specified in Simulation, required maintenance is indicated.
5	Color toner	In the color toner mode, required maintenance is indicated.

(3) Setting the copy counter mode

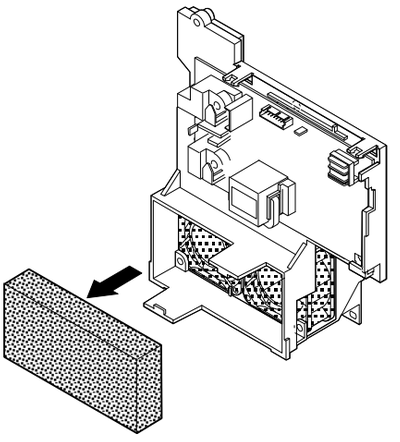
Simulation		Setting code	Auto-clear available	Maintenance counter	Total counter
Main	Sub				
26	03	0	F	double count	double count
		1	F	double count	single count
		2	F	single count	double count
		3	F	single count	single count
		40	×	double count	double count
		41	×	double count	single count
		42	×	single count	double count
		43	×	single count	single count

*1 The double/single count is limited to apply to A3-size paper.
*2 Code other than those given in the above table is invalid or may cause operation error.

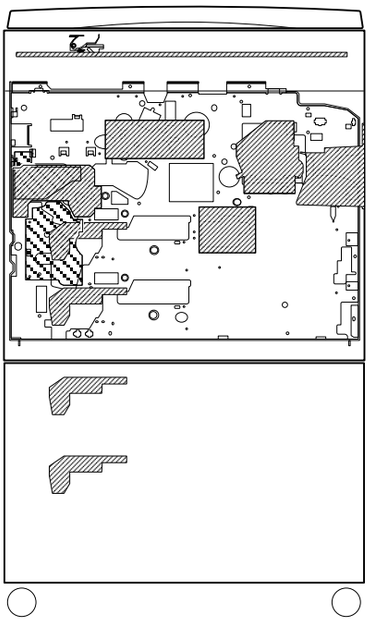
3. Replacing the Ozone Filter

The purpose of the ozone filter is to suppress emitting ozone from the machine, which is generated during corona discharge in the charger units. In order to maintain this effect, the ozone filter requires to be replaced every 80,000 sheets of copy paper.

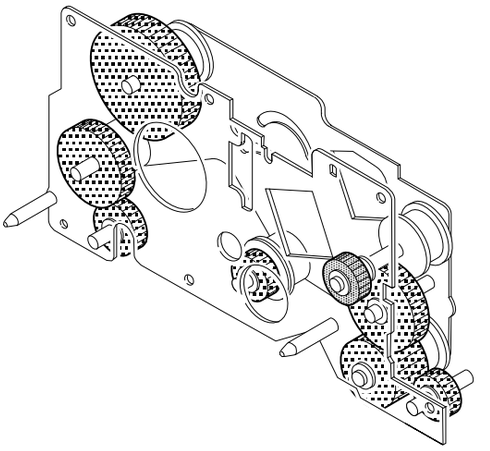
(1) Replacing the suction ozone filter



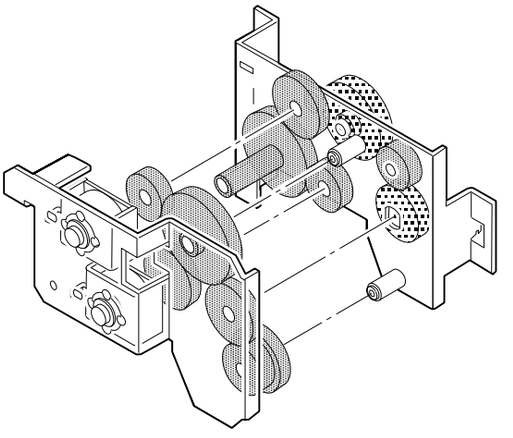
4. Oil/Grease Points



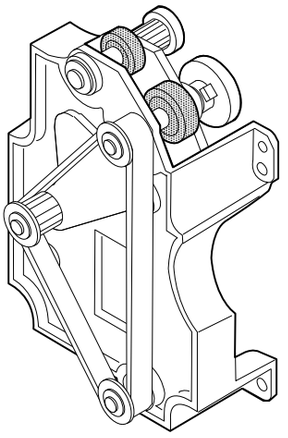
(1) Gear of main driving unit



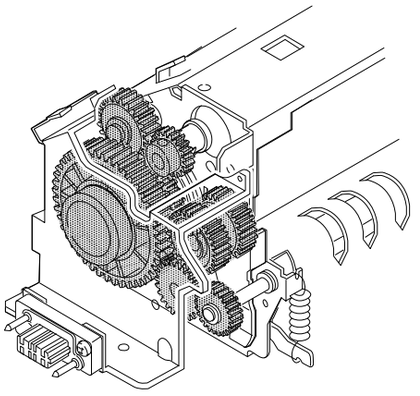
(2) Gear of variable-speed paper-feed unit



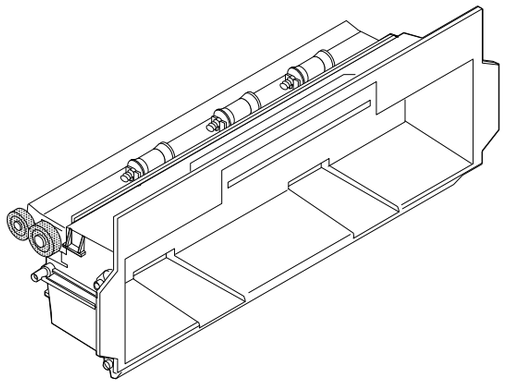
(3) Gear of paper-feed driving unit



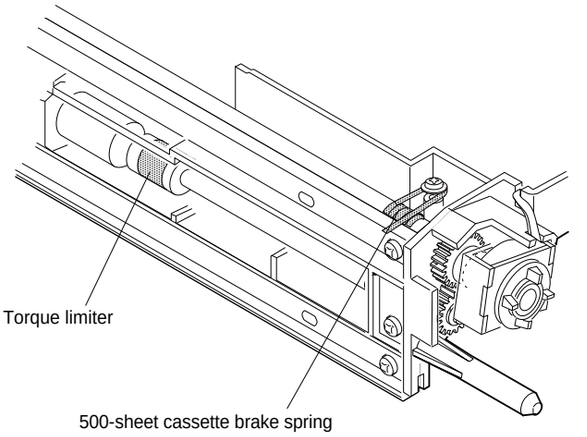
(4) Fusing unit driving gear



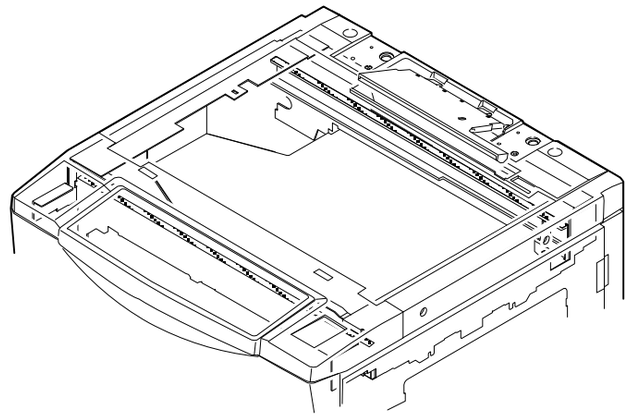
(5) Paper exit roller driving gear



(6) Paper-feed torque limiter
500-sheet cassette brake spring



(7) Optical rail



Note 1: Grease (Molycoat(UKOG-0062FCZZ) or White Molycoat(UKOG-0158FCZZ)) must be applied to the correct grease points of each gear. Do not use too much grease.

Note 2: No grease shall be applied inside the gear of the magnetic clutch.

5. Maintenance Schedule of Options

Maintenance of options must be done during that of the machine.
Maintenance of SF-D20/D21/SF-DM11 is as follows:

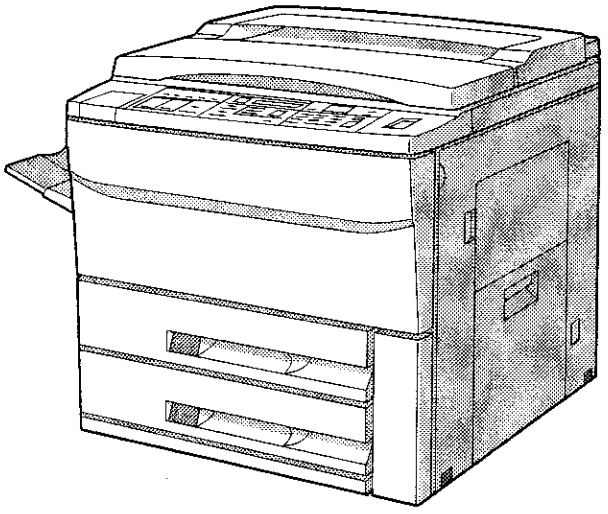
- Duplex unit: Perform Simulation 22-9 to read out data in the duplex counter, and conduct maintenance on the basis of the data.
- Desk: every 80,000 sheets of copy paper.

Maintenance of RADF/ADF is as follows:
Perform Simulation 22-08 to check the contents of the RADF/ADF copy counter, and then conduct maintenance every 80,000 sheets of copy paper.
★ = lubrication F = cleaning v = adjustment b = replacing/mounting X = check(cleaning, replacing and/or adjustment, if necessary), k = repositioning

SF-2025
SF-2030

SHARP SERVICE MANUAL

CODE: 00ZSF2030FM/E



No.1

SF-2030
SF-D20/21
MODEL SF-DM11

CONTENTS

[1] PRODUCT OUTLINE 1-1

[2] PRODUCT SPECIFICATIONS 2-1

[3] OPTIONS SPECIFICATIONS 3-1

[4] COMPONENT IDENTIFICATION 4-1

[5] INSTALLATION 5-1

[6] DISASSEMBLY AND REASSEMBLY 6-1

[7] ADJUSTMENTS 7-1

[8] SIMULATION AND DIAGNOSTICS 8-1

[9] MAINTENANCE AND OTHERS 9-1

SHARP CORPORATION

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CONTENTS

[1] PRODUCT OUTLINE 1-1
1. General description 1-1
2. Target users 1-1
3. Major featurs 1-1
(1) Compact body 1-1
(2) Serviceability and fanctionality 1-1
(3) High copy performance 1-1
(4) Options 1-1
4. System outline 1-1

[2] PRODUCT SPECIFICATIONS 2-1
1. Basic specification 2-1
(1) Type 2-1
(2) Copy method 2-1
(3) Kinds of originals 2-1
(4) Copy speed 2-1
(5) First copy time 2-1
(6) Warmup time 2-1
(7) Multicopy 2-1
(8) Magnification ratio 2-2
(9) Exposure 2-2
(10) Paper feed 2-2
(11) Developing method 2-3
(12) Charge method 2-3
(13) Transfer method 2-3
(14) Separation method 2-3
(15) Fusing method 2-3
(16) Cleaning method 2-3
(17) Light source 2-3
(18) Blanking areas 2-3
(19) Automatic duplex 2-3
(20) Paper receiving tray and finishing 2-3
(21) Additional features 2-4
(22) Power supply 2-4
(23) Power consumption 2-4
(24) Appearance 2-4
(25) Accessories 2-5
2. Consumables 2-5
3. Environmental requirements 2-8

[3] OPTIONS SPECIFICATIONS 3-1
1. SF-A56/17 3-1
2. SF-S15 3-1
3. SF-S53 3-1
4. SF-S18 3-1
5. SF-D20/D21 3-2
6. Others 3-2

[4] COMPONENT IDENTIFICATION 4-1
1. External view 4-1
2. Operation panel 4-3
3. Internal view 4-4
4. Clutches, solenoids 4-5
5. Sensors 4-6
6. Motors 4-7
7. Board list 4-8
8. Duplex copy tray 4-9
9. Desk unit (SF-D20/D21) 4-10

[5] INSTALLATION 5-1
A. Installing conditions 5-1
B. Installation procedure 5-2
(1) SF-2030 5-2
1. Releasing optical locks
A Removing the #2/3 mirror unit lock 5-2
B Releasing the lens and #4/5 mirror unit lock 5-2
2. Fuser unit set up 5-2
A Removing the fuser unit 5-2
B Tensioning the heat roller 5-2
C Installing the cleaning roller 5-2
3. Cleaning corona units 5-3
A Clean the main corona unit 5-3
B Clean the transfer/separation corona wires 5-4
4. Installing accessories 5-4
A Install the copy receive tray 5-4
5. Setting up the upper paper cassette 5-5
A Remove the packing screw of the cassette. 5-5
B Removing the cassette 5-5
C Change the size using the side plates F and R. 5-5
D Insert the rear plate 5-5
E Set the size detect spacer 5-5
F Change the paper size indication plate 5-5
G Set the cassette 5-6
H Load paper 5-6
6. Set up the lower paper cassette 5-6
A Remove the packing screw of the cassette. 5-6
B Change the size using the side plates F and R.
(It had been set to the A3 position when the machine left the factory.) 5-6
C Change the size of the rear plate. 5-6

D Set the size detect spacer 5-6
E Change the paper size indication plate 5-7
7. Lens lock release 5-7
A Removing the lens and releasing the lens lock 5-7
8. Setting the developing unit 5-8
A Supplying developer 5-8
9. Toner density sensor level adjustment 5-8
A Developing unit level adjustment 5-8
10. Toner supply 5-8
A Toner supply 5-8
11. Label attachment 5-9
A Label attachment 5-9
(2) SF-A17/A56 5-10
1 Remove the document cover. 5-10
2 Mount the ADF onto the copier. 5-10
3 Adjust the angle of ADF. 5-11
4 Connect the ADF connectors. 5-11
5 Connect the ADF tray connector. 5-11
6 Attach the tray. 5-11
7 Set the mode. 5-12
8 Adjust the center of the copy. 5-12
9 Adjust the position of the leading edge of original 5-12
(3) SF-S53 5-13
A Mounting of the staple sorter onto the copier 5-15
B Staple sorter operation check 5-17
(4) SF-S52 5-19
(5) SF-S18 5-24
1 Mount the lock plate. 5-24
2 Mount the support guide. 5-24
3 Remove the cut-outs. 5-25
4 Insert the spacers. 5-25
5 Mount the sorter seat. 5-25
6 Mount the sorter seat cover. 5-25
7 Mount the sorter. 5-25
8 Mount the stopper. 5-26
9 Remove the sorter's front cabinet panel. 5-26
10 Attach the sorter to the sorter seat. 5-26
11 Mount the sorter's front cabinet panel. 5-26
12 Connect the sorter connector. 5-27
13 Set the mode. 5-27
(6) SF-S15 (20-Bin Sorter) 5-27
1 Install the support guide. 5-27
2 Mount the sorter seat to the desk. 5-28
3 Remove the front panel of the sorter. 5-28
4 Place the sorter on the sorter seat. 5-28
5 Remove the rear cabinet panel from the copier and cut out the notch in the cabinet panel. 5-28
6 Connect the sorter connectors. 5-29
7 Reattach the rear cabinet panel. 5-29
8 Reattach the front panel of the sorter. 5-29
9 Adjust the clearance between the sorter and the copier. 5-29

10 Set the mode. 5-29
(7) SF-D20/SF-D21 5-30
1 Place the copier on the desk. 5-30
2 Secure the copier to the desk. 5-30
3 Remove the rear cabinet panel from the copier. 5-31
4 Connect the desk relay harness. 5-31
5 Remount the rear cabinet panel onto the copier. 5-31
6 Move the copier to the desired installation location. 5-31
7 Lock the casters. 5-31
8 Lower the adjuster to secure the desk in place. 5-31
9 Pull out the paper cassette. 5-31
10 Adjust the positions of the front and rear side plates. 5-32
11 Adjust the position of the rear edge plate. 5-32
12 Set the paper size detection spacer. 5-32
13 Change the paper size indicator. 5-32
14 Re-insert the paper cassette. 5-33
15 Place the paper in the cassette. 5-33
16 Set the mode. 5-33
17 Pull out the large-capacity paper cassette. 5-33
18 Adjust the positions of the front and rear paper guides. 5-33
19 Adjust the position of the rear edge paper guide. 5-34
20 Set the paper size detection spacer. 5-34
21 Change the paper size indicator. 5-34
22 Re-insert the large-capacity paper cassette. 5-34
23 Place the paper in the cassette. 5-34
24 Set the mode. 5-35
(8) SF-IC11 5-35
1 To remove the stopper for the cassette unit. 5-35
2 To change the size setting of side plate F and side plate R. 5-36
3 To change the size position of the rear end plate. 5-36
4 To set the size detection spacer. 5-36
5 To place the cassette size labels. 5-37
6 To change the paper size indication plate. 5-37
7 To install the cassette main unit on the paper tray. 5-37
(9) SF-DM11 5-37
1 To remove the rear cabinet of the copier main unit. 5-37
2 To install the ADU drive unit. 5-38
3 To install the rear cabinet of the copier main unit. 5-38
4 To remove the toner collecting container. 5-38
5 To remove the cover plate. 5-38
6 To install the ADU unit. 5-38
7 To install the right stopper. 5-38
8 To install the toner collecting container. 5-38
9 To check and adjust the matching guide. 5-38
10 To adjust the center dislocation. 5-38
(10) SF-CM11 5-40
1 Remove the rear cabinet panel from the copier 5-40
2 Install the lift-up unit. 5-40
3 Remount the rear cabinet panel onto the desk. 5-40
4 Remove the toner collecting plate. 5-41

5 Remove the cover plate. . . . 5-41
6 Install the paper feed unit. . . . 5-41
7 Remove the packing screw from the paper cassette. . . . 5-41
8 Change the positions of the front and rear side plates. . . . 5-41
9 Position the rear edge plate. . . . 5-41
10 Set the paper size detection spacer. . . . 5-42
11 Change the paper size indicator. . . . 5-42
12 Fit the paper cassette guides into the guide rails. . . . 5-42
13 Mount the right stopper. . . . 5-42
14 Install the paper cassette. . . . 5-42
15 Place the paper. . . . 5-42
16 Remount the right cabinet panel onto the desk. . . . 5-42
17 Adjust any center misalignment 5-43

[6] DISASSEMBLY AND REASSEMB17 6-1

1. Process unit 6-1
2. Manual feed multicopy unit 6-3
3. Paper feed unit 6-5
4. Transport baseplate unit 6-7
5. Fuser unit 6-9
6. Duplex copy unit 6-11
7. Rear frame side major components 6-13
8. Operation panel unit and document size sensor board 6-16
9. Optical unit 6-18

[7] ADJUSTMENT 7-1

1. Developing Unit 7-1
   (1) Clearance Adjustment of Developing Doctor Blade 7-1
   (2) Position Adjustment of Developing Magnet Roller Main Pole 7-1
   (3) Developing Bias Adjustment 7-2
   (4) Notes on installing various rollers of the developing unit 7-2
   (5) Notes on applying the developing side seals (front and rear) 7-2
2. Processing Unit 7-3
   (1) Adjustment of Blank Lamp Position 7-3
   (2) Adjustment of High-Voltage Output Balance 7-3
      A. Applying the Special Measuring Tool 7-3
      B. Adjusting the Transfer Charger Current 7-4
      C. Checking the Electrostatic Main Charger Current 7-5
      D. Adjusting the Electrostatic Main Charger Grid Voltage 7-5
      E. Adjusting the Separation Charger Output 7-6
   (3) Notes on maintenance for high-voltage units 7-6
      A. Electrostatic Charger Unit 7-6
      B. Transfer/Separation Charger Unit 7-6
3. Optical System 7-7
   (1) Adjusting the Reference Position of Lens 7-8
   (2) Adjusting the Reference Position of 4. and 5. Mirror 7-8
   (3) Adjusting the Longitudinal Magnification 7-8
   (4) Adjusting the Resolution 7-9
   (5) Adjusting the Lateral Magnification 7-10

(6) Inputting the Lens Travel Correction Value 7-10
(7) Correcting the Longitudinal Distortion 7-12
(8) Correcting the Lateral Distortion 7-13
(9) Adjusting the Center Deviation 7-14
(10) Adjusting the Exposure Balance 7-14
(11) Adjusting the Copy 7-15

4. Adjustment of Copy Density 7-17
1. When must the copy density be adjusted ? 7-17
2. Notes on adjustment of copy density 7-17
3. Procedure for copy density adjustment 7-17
(1) Initial setting of auto-exposure density level (User adjustment) 7-17
(2) Initial setting of TSM mode (User adjustment) 7-17
(3) Adjustment of AE sensor level 7-18
(4) Setting of drum sensitivity 7-18
(5) Setting of test chart 7-18
(6) Adjustment of copy density 7-18

5. Adjustments relating to Process Control 7-21

[8] Simulation and diagnostics 8-1
1. Simulation 8-1
(1) Introduction 8-1
(2) Purpose 8-1
(3) Simulation execution procedure 8-1

[9] Maintenance and Others 9-1
1. Maintenance Schedule 9-1

2. Counters and Simulations Related to Maintenance 9-2
(1) List of counters and simulations related to maintenance 9-2
(2) Maintenance Indication 9-3
(3) Setting the copy counter mode 9-5

3. Replacing the Ozone Filter 9-5
(1) Replacing the suction ozone filter 9-5

4. Oil/Grease Points 9-6
(1) Gear of main driving unit 9-6
(2) Gear of variable-speed paper-feed unit 9-6
(3) Gear of paper-feed driving unit 9-6
(4) Fusing unit driving gear 9-6
(5) Paper exit roller driving gear 9-6
(6) Paper-feed torque limiter 500-sheet cassette brake spring 9-7
(7) Optical rail 9-7

5. Maintenance Schedule of Options 9-7

[1] PRODUCT OUTLINE

1. General description

The SF-2030 is medium class copier that produces 30 copies per minute. The SF-2040 has all the standard features of medium class copiers to provide high productivity in offices with improved versatility for users.

2. Target users

Average copy volume: 8,000 ~ 12,000 copies/month

3. Major features

(1) Compact body

Use of a front loading paper cassette.

(2) Serviceability and functionality

① Use of a liquid crystal display.

② Department control counter (standard provision, max. 50 departments).

③ Use of key operator codes.

(3) High copy performance

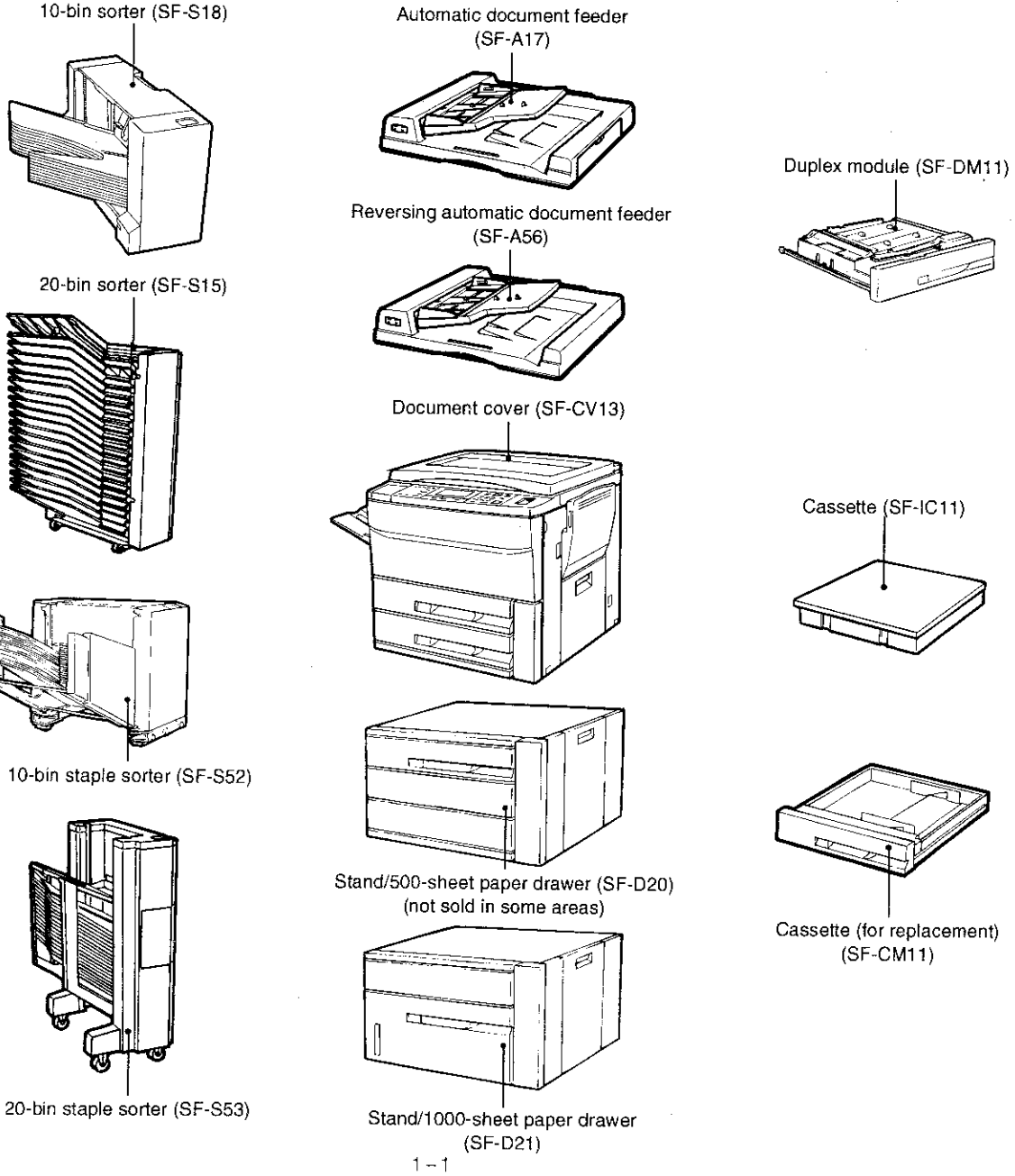
① First copy time: 4.1sec

② Job speed
S → S: 100%, D → D: 70%

(4) Options

Refer to the system outline below.

4. System outline


10-bin sorter (SF-S18)
20-bin sorter (SF-S15)
10-bin staple sorter (SF-S52)
20-bin staple sorter (SF-S53)
Automatic document feeder (SF-A17)
Reversing automatic document feeder (SF-A56)
Document cover (SF-CV13)
Stand/500-sheet paper drawer (SF-D20) (not sold in some areas)
Stand/1000-sheet paper drawer (SF-D21)
Duplex module (SF-DM11)
Cassette (SF-IC11)
Cassette (for replacement) (SF-CM11)

[2] PRODUCT SPECIFICATIONS

1. Basic specification

(1) Type

Desktop

(2) Copy method

Dry electrostatic copier

(3) Kinds of originals

Sheet, book, three dimensional object		
Thickness of original:		Maximum 30mm in level with the original cover in use.
Weight of original:		Maximum 1.8 kg (4 pounds)
Maximum original size:		A3 (11" x 17"), Ledger
Original alignment:		Center and left
Original sensor:		Not used. (Provided in RADF/ADF.)
Sensing size	AB series;	A3, B4, A4, A4R, A5
	Inch series:	Ledger, Legal, Letter, Letter R, Invoice

Option:	RADF
Original loading capacity:	50 sheets
Original size:	A3 to A5, Ledger – Invoice
Original replace speed:	30 sheets per minute
Weight of original:	35 to 128 g/m^2 (14 to 34 lbs)
Mixed paper feed mode:	Possible (same width)

(4) Copy speed

	Actual (1:1)	Enlarge (ratio)	Reduce (ratio)
A3	16 sheets per minute	11 sheets per minute (200%)	12 sheets per minute (50%)
B4	18 sheets per minute	11 sheets per minute (200%)	14 sheets per minute (50%)
A4 (portrait)	30 sheets per minute	14 sheets per minute (200%)	23 sheets per minute (50%)
A4 (landscape)	23 sheets per minute	12 sheets per minute (200%)	17 sheets per minute (50%)
B5 (portrait)	30 sheets per minute	14 sheets per minute (200%)	23 sheets per minute (50%)
B5 (landscape)	23 sheets per minute	12 sheets per minute (200%)	17 sheets per minute (50%)
Ledger	16 sheets per minute	11 sheets per minute (200%)	12 sheets per minute (50%)
Legal	18 sheets per minute	11 sheets per minute (200%)	14 sheets per minute (50%)
Letter (portrait)	30 sheets per minute	14 sheets per minute (200%)	23 sheets per minute (50%)
Letter (landscape)	23 sheets per minute	12 sheets per minute (200%)	17 sheets per minute (50%)

NOTE: Copy speeds indicated in Enlargement and Reduction modes are the slowest speeds in the respective mode.

(5) First copy time

About 4.1 seconds from upper cassette

(6) Warmup time

About 60 seconds
(With pre-heat feature)
Misfeed recovery time: 8 seconds, provided the machine is in the standard condition in 60 seconds after opening the door.

(7) Multicopy

Maximum multicopy number: 999 sheets

(8) Magnification ratio

Fixed ratio	AB series: 4R+4E; 200, 141, 122, 115, 100, 86, 81, 70, 50%
	Inch series: 4R+4E; 200, 141, 129, 121, 100, 95, 77, 64, 50%
Zooming range:	50 to 200% (1% increments)

(9) Exposure system

Slit exposure and moving optical system (fixed original table)

(10) Paper feed

Copy size (maximum ~ minimum)	AB series: A3 to A6R
	Inch series: Ledger ~ Invoice
Method	One tray + multi-manual feed
Capacity	500 + 50 sheets

AB series

Paper entry	Paper size	Paper weight	Size selection	Side, front
Upper cassette (Option)	B5/B5R A4/A4R/B4/A3	56 ~ 80g/m^2 15 ~ 21 lbs.	Selection by way of guide replacement by the service engineer	Front, drawer in the same body (ADU compatibility available)
Lower cassette	A5/B5/B5R A4/A4R/B4/A3 A5: ✳ With the option inner cassette used	56 ~ 80g/m^2 15 ~ 21 lbs.	Selection by way of guide replacement by the service engineer	By way of front, inner cassette

Inch series

Paper entry	Paper feed size	Paper weight	Size selection	Side, front
Upper cassette (Option)	Letter/Letter R/ Legal/Ledger	56 ~ 80g/m^2 15 ~ 21 lbs.	Selection by way of guide replacement by the service engineer	Front, drawer in the same body (ADU compatibility available)
Lower cassette	Letter/Letter R/ Legal/Ledger/ Invoice ✳ With the option inner cassette used	56 ~ 80g/m^2 15 ~ 21 lbs.	Selection by way of guide replacement by the service engineer	By way of front, inner cassette

Initial setting

	Japan	Outside Japan (Inch)	Outside Japan (AB)	Remark
Copier upper stage	✳ B5R	—	—	✳ When shipping, the domestic (Japan/Taiwan) paper feed module is attached.
Copier lower stage	A3	Ledger	A3	
Option cassette module	A4	Legal	A4	SF-CM11
Multi-stage desk (1st stage)	B4	Letter R	A4R	SF-D19 (Japan only)
Multi-stage desk (2nd stage)	A3	—	—	SF-D20 (Outside Japan only)
Multi-stage desk (3rd stage)		—	—	
LCD desk (1st stage)	—	—	—	
LCD desk (2nd stage)	—	Letter	A4	SF-D21 (Outside Japan only)
Inner cassette	A3	Ledger	A3	SF-IC11

Manual feed

Paper size:	AB series: Inch series:	A3 to A6R Ledger ~ Invoice (Min. width: 100mm, Min. length: 139.7mm)
Paper weight:	Multifeed mode: Single feed mode:	56 to 80 g/m^2 (15 to 21 lbs) 52 to 128 g/m^2 (14 to 34 lbs) (A4 size or under, if above 105 g/m^2 or 28 lbs)
Kind of paper:		Standard, Sharp designated paper, OHP
Detection size	Inch series: AB series:	Available: Ledger, Legal, Letter, Letter (R), invoice Available: A3, B4, A4, A4R, A5

(11) Developing method Dry, two components magnetic brush method

(12) Charge method (–) DC saw-tooth electrode method

(13) Transfer method (–) DC Corotron method

(14) Separation method AC Corotron method

(15) Fusing method Heat roller method

(16) Cleaning method Blade method

(17) Light source Halogen lamp

(18) Blanking areas

Void area:	3mm from the lead edge
Image loss:	3mm at maximum during the actual (1:1) copy mode

(19) Automatic duplex

Option (SF-DM11)		
Location		Copier upper module slot
Size	AB series:	A3, B4, A4, A4R, A5 (B5 and B5R only JAPAN)
	Inch series:	Ledger, Legal, Letter, Letter R
Capacity		50 sheets (below A4 or letter sizes) or 30 sheets (above B4 or 8½" x 14" size)
Paper weight		56 to 80 g/m^2 (15 to 21 lbs)

(20) Paper receive tray and finishing

Paper receive tray capacity		250 sheets	
Finishing (Standard/Option)		Option	
Finisher function	Sorted bin capacity	Non-sorted bin capacity	
10-bin sorter	30 sheets (A4)	100 sheets	Shifting bins (SF-S18)
20-bin sorter	50 sheets (All sizes)	100 sheets	Fixed bins (SF-S15)
20-bin staple sorter	50 sheets (A4)	250 sheets	Shifting bins (SF-S53)
20-bin staple sorter	35 sheets (25 sheets if stapler used)	100 sheets	Shifting bins (SF-S52)

(21) Additional features

	Availability of feature	
APS	○	Overseas: Available when RADF/ADF is used
AMS	○	Inhibited when mixed paper feed/ Available when RADF/ADF is used
Margin shift	○	9mm shift (S → S), with adjustment function
DPCM	○	Enlarge not permitted. Combination with the duplex function allowed.
Edge erase	○	7 to 12mm wide depending on the size. Equivalent to SF-2022/2027.
Cover insertion	○	Selection of cover/rear or cover/both
Job memory	○	Recordable up to 9 jobs
Auditor	○	Allowes up to 50 departments.
Message display	○	
Key operator program	○	
Communication	○	Bi-directional. Option I/F PWB (available from service parts.)
Process control	○	
Auto start	○	From the energy save mode.
Auto tray switching	○	
Priority selection of tray	×	
Vendor	○	

APS: Auto paper selection
AMS: Auto magnification ratio selection
DPCM: Dual page copy mode

Binding margin shift

Width	AB series	Inch series
Single sides to single sided	9mm	1/4"
Double sided to single sided	9mm	1/4"
Single sided to double sided (front)	9mm	1/4"
(reverse)	9mm	1/4"
Double sided to double sided (front)	9mm	1/4"
(reverse)	9mm	1/4"

Frame edge erase

AB series		Inch series	
Size	Deleted width (mm)	Size	Deleted width (mm)
A3	11.5±3	Ledger	11.5±3
B4	9.5±3	Legal	7 ±3
A4	11.5±3	Letter	11.5±3
A4R	10 ±3	Letter R	7 ±3
B5	9.5±3	Invoice	7 ±3
B5R	8 ±3		

(22) Power supply

Voltage: 100V, 110V, 120V, 127V, 220 ~ 230V, 240V
Frequency: 50/60Hz, universal

(23) Power consumption

Maximum power consumption: 1.5KW, maximum, with options used

(24) Appearance

WxDxH (mm) 633 x 650 x 567 (at the top of the table glass)
633x 650 x 607 (at the top of the original cover)
Occupied area (W x D in mm) 1205 x 650 (with the paper receive tray and manual feed bypass open
Weight: Main body About 62Kg
Paper feed module: 3.9Kg
Original cover: 1.5Kg

(25) Accessories

Destination	Japan	SEC	SECL	SEEG	SUK	SCA	AB agent	Inch agent
Drum	Installed when shipping.	Installed when shipping.	Installed when shipping.	Separately packed.	Separately packed.	Installed when shipping.	Partly packed.	Partly packed.
Developer (Black)	○	×	×	×	×	×	×	×
Toner cartridge	○	×	×	×	×	×	×	×
Original cover	Standard provision	Option	Option	Option	Option	Option	Standard provision	
Paper exit tray 1 *1	○							
Original table	×	○					×	
Toner collection container	○ (4 pcs.) One is installed when shipping.							
Operation manual	Japanese	Exclusive English	English/French	GG: German BG: None	Exclusive English	English	English/French/ Arabic Typical example	English/ Spanish Typical example
Dust cover	○	×					○ (Part)	
Zooming ratio table	○							
ROM language	Japanese	English	English	GG: German BG: None	English	English	English/French/Spanish depending on the destination.	
Key sheet	Japanese	English	English/French	GG: German BG: None	English	English	English, partly Spanish	English, partly Spanish
	SEL = English/French packed together. SEEG (BG) = Treated in a kit.							
Other printed matters: Delivery/installation report (Japan/SEEG), SCA warranty, Warranty registration (SUK), Maintenance card, Counter contract × 2 (Japan)								

*1: Retractable (Japan), Fixed (Outside Japan)

2. Consumables

SEC

No.	Name	Content		Life	Product name	Package	Remark
1	Drum	OPC drum	× 1	80K	SF-230DR	10	
2	Developer (Black)	Developer	(850g) × 10	80K (× 10)	SF-230MD1	1	(SF-230ND1) × 10 = SF-230MD1
3	Toner (Black)	Toner cartridge	(600g) × 10	15K (× 10)	SF-230MT1	1	(SF-230NT1) × 10 = SF-230MT1
4	Upper heat roller kit	Upper heat roller Fusing separation pawl (Upper) Fusing gear	× 1 × 4 × 1	160K	SF-230UH	5	For replacement of the fusing separation pawl (80K life) at every 80K, use the service part.
5	Lower heat roller kit	Lower heat roller Fusing separation pawl (Lower)	× 1 × 2	160K	SF-240LH	5	For replacement of the fusing separation pawl (80K life) at every 80K, use the service part.
6	80K maintenance kit	Cleaner blade Charging blade unit Drum separation pawl unit	× 1 × 1 × 1	80K	SF-235KA1	5	
7	Cleaner blade	Cleaner blade	× 10	80K (× 10)	SF-222CB	1	
8	Upper cleaning roller	Upper cleaning roller	× 10	80K (× 10)	SF-240UR	1	(SF-240RU) × 10 = SF-240UR
9	Lower cleaning roller	Lower cleaning roller	× 10	80K (× 10)	SF-235CR2	1	
10	Staple cartridge	Staple cartridge (3 pcs. pack)	× 10		SF-LS51	1	Common to the one for the staple sorter (SF-S51). (SF-S51) x 10 = SF-LS51
11	Staple cartridge	Staple cartridge	× 5	5,000 times × 5	SD-LS20	10	Common to the one for the staple sorter (SF-S53). (SD-SC20) x 5 = SD-LS20

* For Toner collection container (4 pcs./80K)/Screen grid (80K)/Charger wire (80K)/Ozone filter (80K)/Toner reception seal (160K)/DV seal (160K), use service parts. The charging plate nit (80K) and drum separation pawl unit (80K) are also available as service parts.

SECL

No.	Name	Content		Life	Product name	Package	Remark
1	Drum	OPC drum	× 1	80K	SF-230DR	10	
2	Developer (Black)	Developer	(850g) × 10	80K (× 10)	SF-230MD1	1	(SF-230ND1) × 10 = SF-230MD1
3	Toner (Black)	Toner cartridge	(600g) × 10	15K (× 10)	SF-230MT1	1	(SF-230NT1) × 10 = SF-230MT1
4	80K maintenance kit	Upper cleaning roller	× 1	80K	SF-240KA	1	
		Lower cleaning roller	× 1				
		Cleaner blade	× 1				
		Toner collection container	× 4				
		Fusing separation pawl (Upper)	× 4				
		Fusing separation pawl (Lower)	× 2				
		Screen grid	× 1				
		Charging plate unit	× 1				
		Drum separation pawl unit	× 1				
5	160K maintenance kit	Upper heat roller	× 1	160K	SF-230KB	1	
		Lower heat roller	× 1				
		Toner reception seal	× 1				
		DV seal	× 1				
		Low speed gear	× 1				
6	Staple cartridge	Staple cartridge (3 pcs. pack)	× 1		SF-SC51	10	Common to the one for the staple sorter (SF-S51)
7	Staple cartridge	Staple cartridge	× 5	5,000 times × 5	SD-LS20	10	Common to the one for the staple sorter (SF-S53) (SD-SC20) x 5 = SD-LS20

SEEG, SUK

No.	Name	Content		Life	Product name	Package	Remark
1	Drum	OPC drum	× 1	80K	SF-230DM	10	
2	Developer (Black)	Developer	(850g) × 10	80K (× 10)	SF-230LD1	1	(SF-230DV1) × 10 = SF-230LD1
3	Toner (Black)	Toner cartridge	(600g) × 10	15K (× 10)	SF-230LT1	1	(SF-230T1) × 10 = SF-230LT1
4	80K maintenance kit	Upper cleaning roller	× 1	80K	SF-240KA	1	Distinguished from A3SF240KF to cope with EAN code.
		Lower cleaning roller	× 1				
		Cleaner blade	× 1				
		Toner collection container	× 4				
		Fusing separation pawl (Upper)	× 4				
		Fusing separation pawl (Lower)	× 2				
		Screen grid	× 1				
		Charging plate unit	× 1				
		Drum separation pawl unit	× 1				
5	160K maintenance kit	Upper heat roller	× 1	160K	SF-230KB	1	Distinguished from A3SF230KB to cope with EAN code.
		Lower heat roller	× 1				
		Toner reception seal	× 1				
		DV seal	× 1				
		Fusing gear	× 1				
6	Staple cartridge	Staple cartridge (3 pcs. pack)	× 1		SF-SC51	10	Common to the one for the staple sorter (SF-S51).
7	Staple cartridge	Staple cartridge	× 5	5,000 times × 5	SF-LS20	10	Common to the one for the staple sorter (SF-S53). (SD-SC20) x 5 = SD-LS20

SCA, SCNZ, Middle East, Africa

No.	Name	Content		Life	Product name	Package	Remark
1	Drum	OPC drum	× 1	80K	SF-230DM	10	
2	Developer (Black)	Developer	(850g)× 1	80K (× 10)	SF-230LD1	1	(SF-230DV1) × 10 = SF-230LD1
3	Toner (Black)	Toner cartridge	(600g)× 1	15K (× 10)	SF-230LT1	1	(SF-230T1) × 10 = SF-230LT1
4	80K maintenance kit	Upper cleaning roller	× 1	80K	SF-240KA	1	
		Lower cleaning roller	× 1				
		Cleaner blade	× 1				
		Toner collection container	× 4				
		Fusing separation pawl (Upper)	× 4				
		Fusing separation pawl (Lower)	× 2				
		Screen grid	× 1				
		Charging plate unit	× 1				
		Drum separation pawl unit	× 1				
5	160K maintenance kit	Upper heat roller	× 1	160K	SF-230KB	1	
		Lower heat roller	× 1				
		Toner reception seal	× 1				
		DV seal	× 1				
		Fusing gear	× 1				
6	Staple cartridge	Staple cartridge (3 pcs. pack)	× 1		SF-SC51	10	Common to the one for the staple sorter (SF-S51)
7	Staple cartridge	Staple cartridge	× 5	5,000 times × 5	SD-LS20	10	Common to the one for the staple sorter (SF-S53) (SD-SC20) x 5 = SD-LS20

Asia, Middle/South America

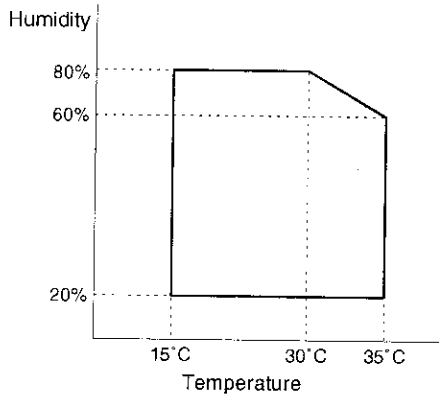
No.	Name	Content		Life	Product name	Package	Remark
1	Drum	OPC drum	× 1	80K	SF-230DR	10	
2	Developer (Black)	Developer	(850g)× 10	80K (× 10)	SF-230CD1	1	(SF-230SD1) × 10 = SF-230CD1
3	Toner (Black)	Toner cartridge	(600g)× 10	15K (× 10)	SF-230CT1	1	(SF-230ST1) × 10 = SF-230CT1
4	80K maintenance kit	Upper cleaning roller	× 1	80K	SF-240KA	1	
		Lower cleaning roller	× 1				
		Cleaner blade	× 1				
		Toner collection container	× 4				
		Fusing separation pawl (Upper)	× 4				
		Fusing separation pawl (Lower)	× 2				
		Screen grid	× 1				
		Charging plate unit	× 1				
		Drum separation pawl unit	× 1				
5	160K maintenance kit	Upper heat roller	× 1	160K	SF-230KB	1	
		Lower heat roller	× 1				
		Toner reception seal	× 1				
		DV seal	× 1				
		Fusing gear	× 1				
6	Staple cartridge	Staple cartridge (3 pcs. pack)	× 1		SD-SC51	10	Common to the one for the staple sorter (SF-S51)
7	Staple cartridge	Staple cartridge	× 5	5,000 times × 5	SD-LS20	10	Common to the one for the staple sorter (SF-S53) (SD-SC20) x 5 = SD-LS20

3. Environmental requirements

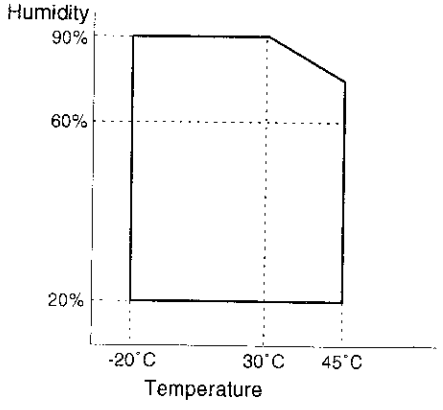
Conditions required for proper operation of the machine, as well as assurance of copy quality, the following are requested.

① Standard conditions
Recommended temperature range at 20 to 25 Centigrade (68 to 77 degrees F) and humidity range at 65 ± 5%RH.

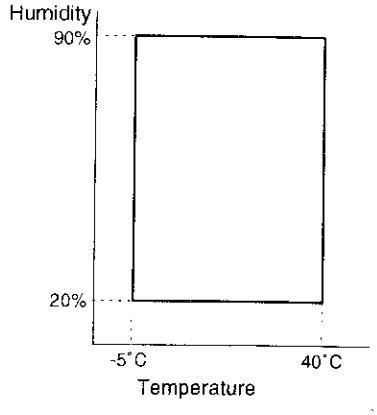
② Operating conditions



③ Shipping conditions

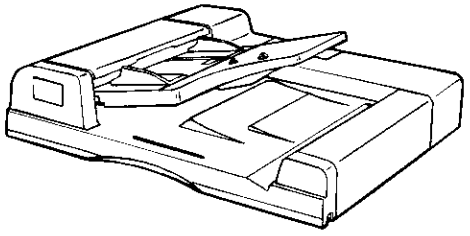


④ Consumables storage conditions



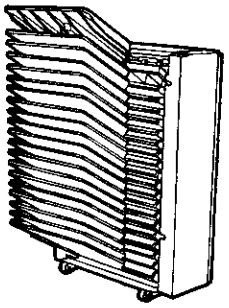
[3] OPTIONS SPECIFICATIONS

1. SF-A17/A56



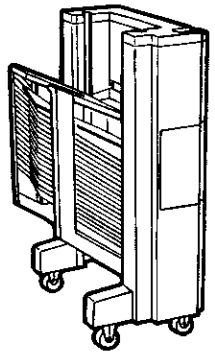
Acceptable originals	Weight:	Single-sided originals: 14 to 34 lbs. Two-sided originals (SF-A56 only): 14 to 34 lbs. for 5-1/2″ × 8-1/2″ and 8-1/2″ × 11″ originals. 14 to 29 lbs. for 8-1/2″ × 14″ and 11″ × 17″ originals.
	Size:	5-1/2″ × 8-1/2″ to 11″ × 17″
	Capacity:	Up to 50 sheets for 5-1/2″ × 8-1/2″, 8-1/2″ × 11″ , and 8-1/2″ × 14″ originals provided the total aggregate thickness does not exceed 1/4″ or 6.5 mm (14 to 20 lbs.) or 3/16″ or 5 mm (21 to 34 lbs.) Up to 30 sheets for 11″ × 17″ originals.
Power supply		Drawn from the copier
Weight		SF-A17: Approx. 22.1 lbs. (10 kg) SF-A56: Approx. 24.3 lbs. (11 kg)
Dimensions	SF-A17:	22-31/64″ (W) × 20-33/64″ (D) × 4-11/32″ (H) (571 mm (W) × 521 mm (D) × 110 mm (H))
	SF-A56:	23-5/16″ (W) × 20-33/64″ (D) × 4-11/32″ (H) (592 mm (W) × 521 mm (D) × 110 mm (H))

2. SF-S15



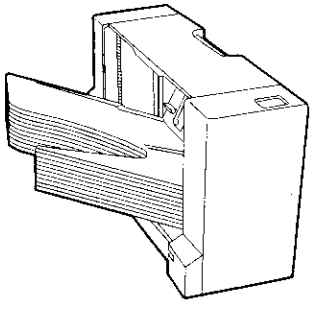
Name	20-bin sorter
No. of bins	20 bins
Paper collection	Copy face up
Capacity per bin	Max. 50 sheets (100 sheets: Top bin)
Allowable paper size/weight for collating	Max. A3, Min.: B5 (Min. A6 for non-sort) Non-sort: 52 ~ 128g/m^2, Sort/Grouping: 56 ~ 80g/m^2
Power source	Supplied from the copier.
Dimensions	500mm (W) × 520mm (D) × 957mm (H)
Weight	About 13kg

3. SF-S53



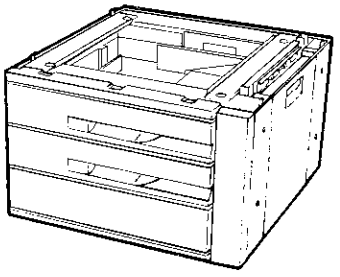
Name	Staple sorter
No. of bins	20 bins
Paper collection	Copy face up
Capacity per bin	Max. 50 sheets (250 sheets: Top bin)
Allowable paper size/weight for collating	Max.: A3, Min.: B5 (Non-sort: Min. A5), Non-sort: 52 ~ 128g/m^2, Sort/staple sort/grouping: 56 ~ 89g/m^2
No. of sheets for stapling	50 sheets (80g/m^2)
Power source	Supplied from the copier.
Dimensions	475mm (W) × 597mm (D) × 995mm (H)
Weight	About 42.1kg

4. SF-S18



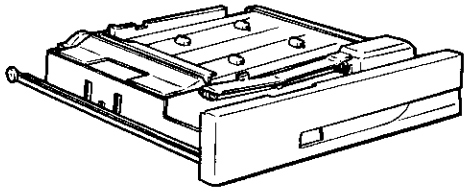
Name	10-bin sorter
No. of bins	10 bins
Reception method	Copy face up
Capacity per bin	Max. 30 sheets (Top bin: 100 sheets)
Collatable paper size/weight	Max. A3, Min. A5 (Non-sort, Min. A6) Non-sort: 52 ~ 128g/m^2, Sort/group: 56 ~ 80g/m^2
Power source	Supplied from the copier.
Dimensions	335mm(W) × 493mm(D) × 298mm(H)
Weight	About 7kg

5. SF-D20/D21



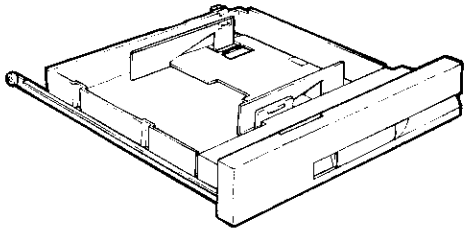
Name	2-cassette paper feed desk
Paper size and capacity	550 sheets of A3, B4, A4, or B5 for each cassette
Paper weight	56 ~ 80g/m^2
Paper transport system	Roller transport (center reference)
Power source	Supplied from the copier.
Dimensions	600mm (W) × 625mm (D) × 451mm (H)
Weight	About 32kg

6. SF-DM11



Name	Duplex module
Paper size	A3 ~ B5
Paper weight	56 ~ 80g/m^2
Capacity	A3/B4: 30 sheets, A4/B5: 50 sheets
Power source	Supplied from the copier.
Weight	About 6kg

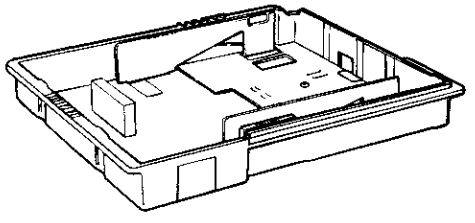
7. SF-CM11



Cassette module

- Equivalent to the upper cassette of the copier body. The optional 2-cassette paper feed desk can be attached.

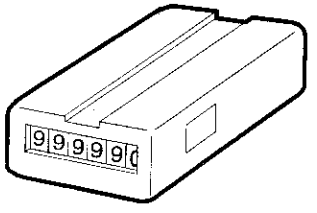
8. SF-IC11



Inner cassette

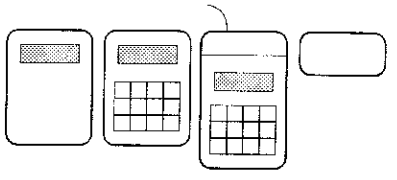
- Paper cassette for replacement of the lower cassette.

9. SF-71A (counter), SF-71B (socket)



- Personal counter

10. Other counters

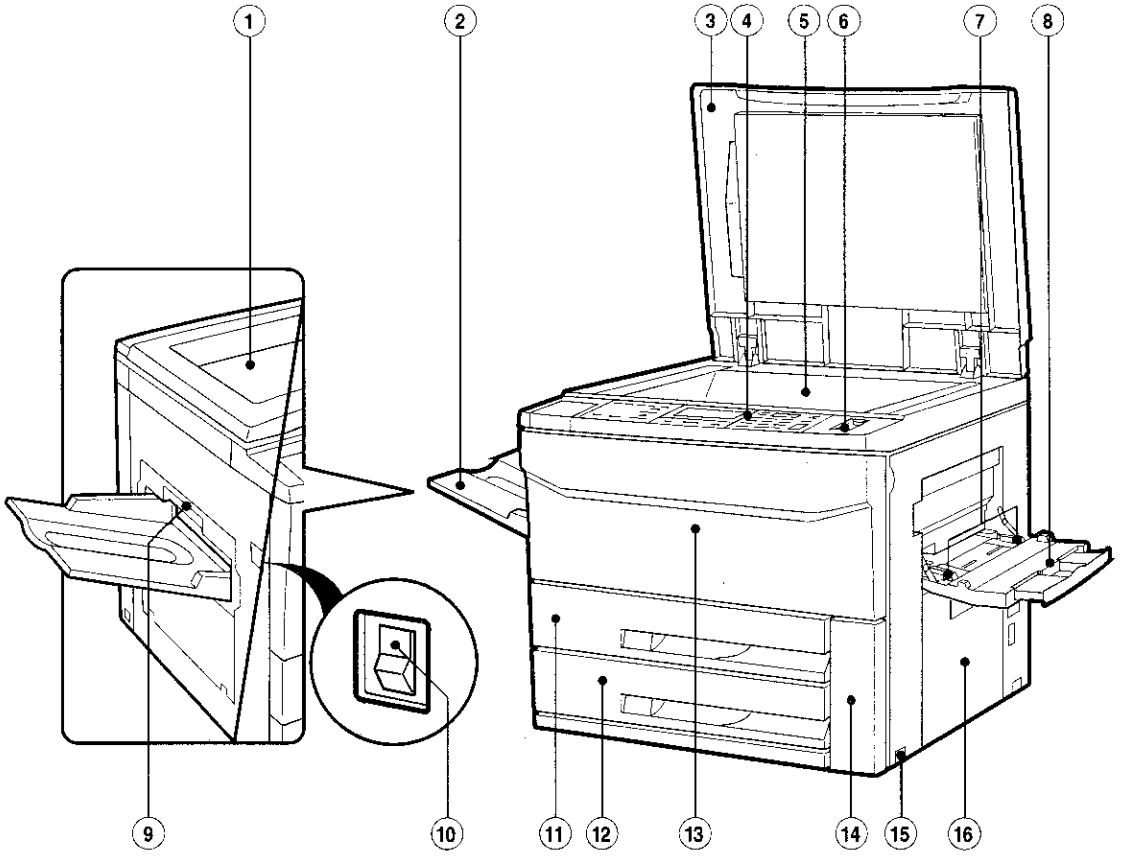


Card-type department counter (SF-EA11)
Password-system department counter (SF-EA12)
Counter commander (SF-EA13)

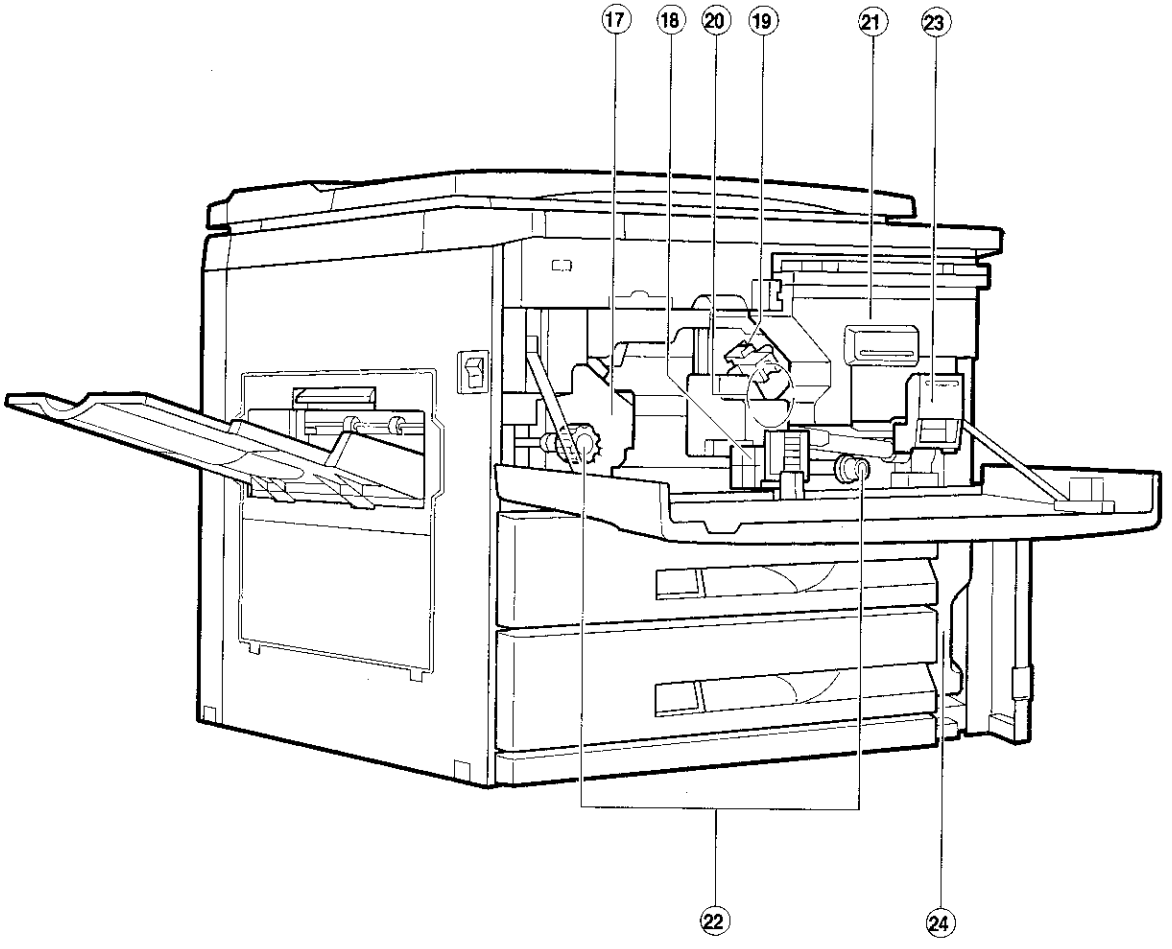
11. Desk SF-DS15

[4] COMPONENT IDENTIFICATION

1. External view

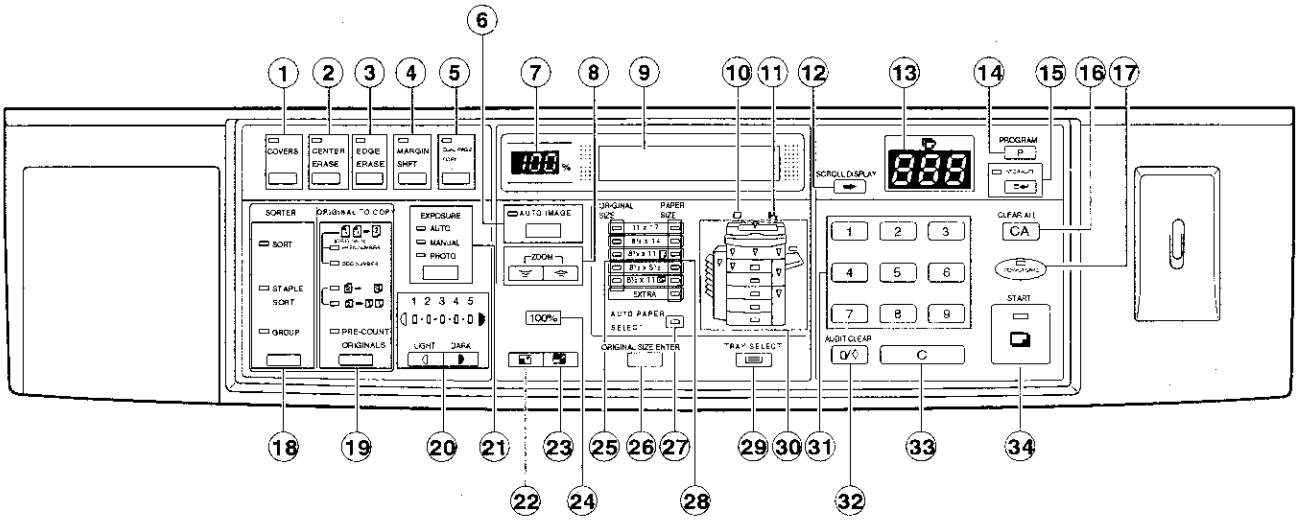


①	Document holder	②	Exit tray	③	Document cover (optional)
④	Operation panel	⑤	Document glass	⑥	Paper clip tray
⑦	Manual feed tray paper guides	⑧	Manual feed tray	⑨	Exit area cover
⑩	Power switch	⑪	Duplex module or 500-sheet paper drawer (optional)	⑫	Lower paper tray
⑬	Front cover	⑭	Toner collecting container cover	⑮	Handles
⑯	Side cover				



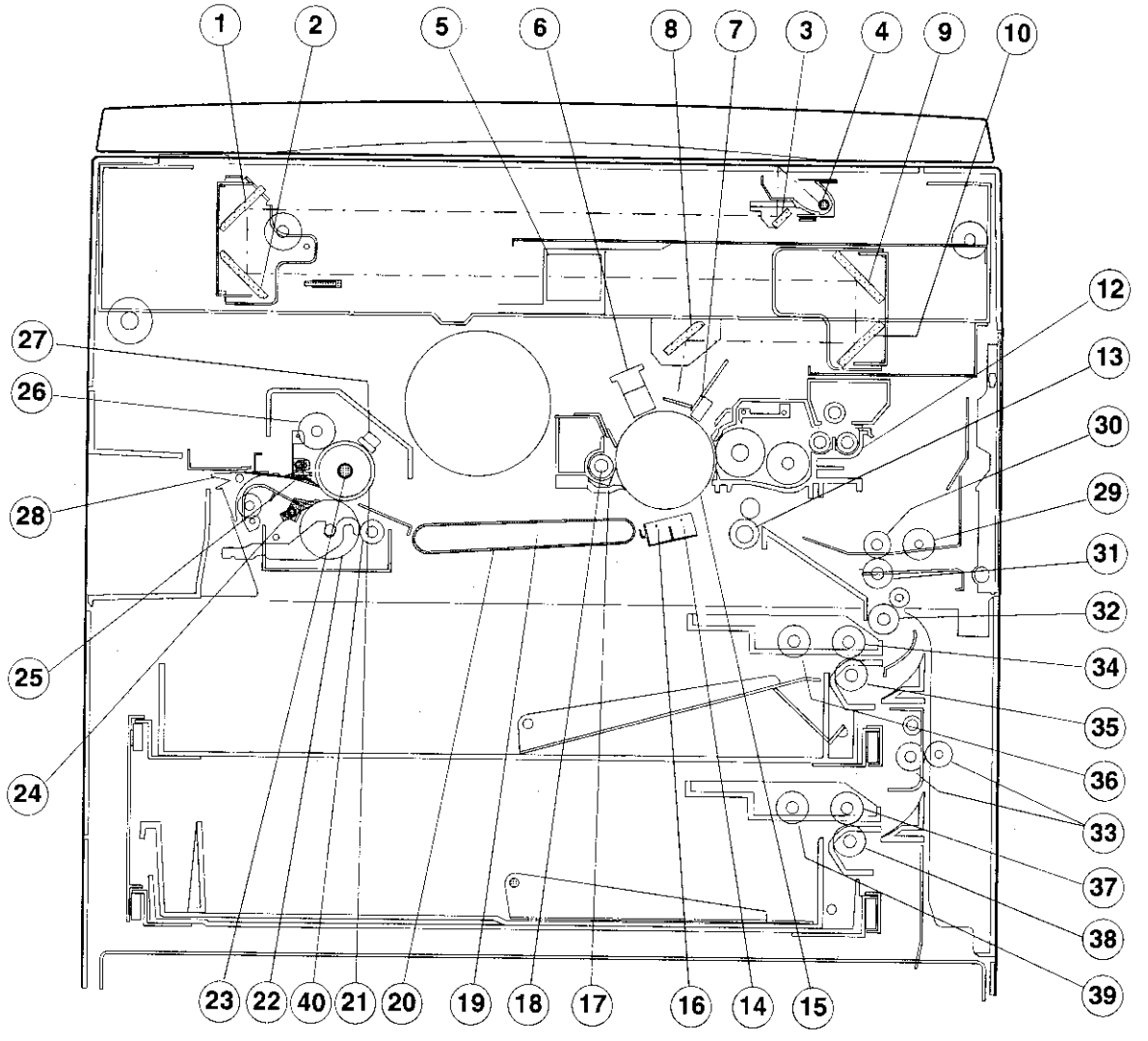
⑰	Fusing unit	⑱	Transport lever	⑲	Corona unit
⑳	Photoconductive drum	㉑	Toner hopper	㉒	Roller rotating knobs
㉓	Toner hopper lock lever	㉔	Toner collection container		

2. Operation panel



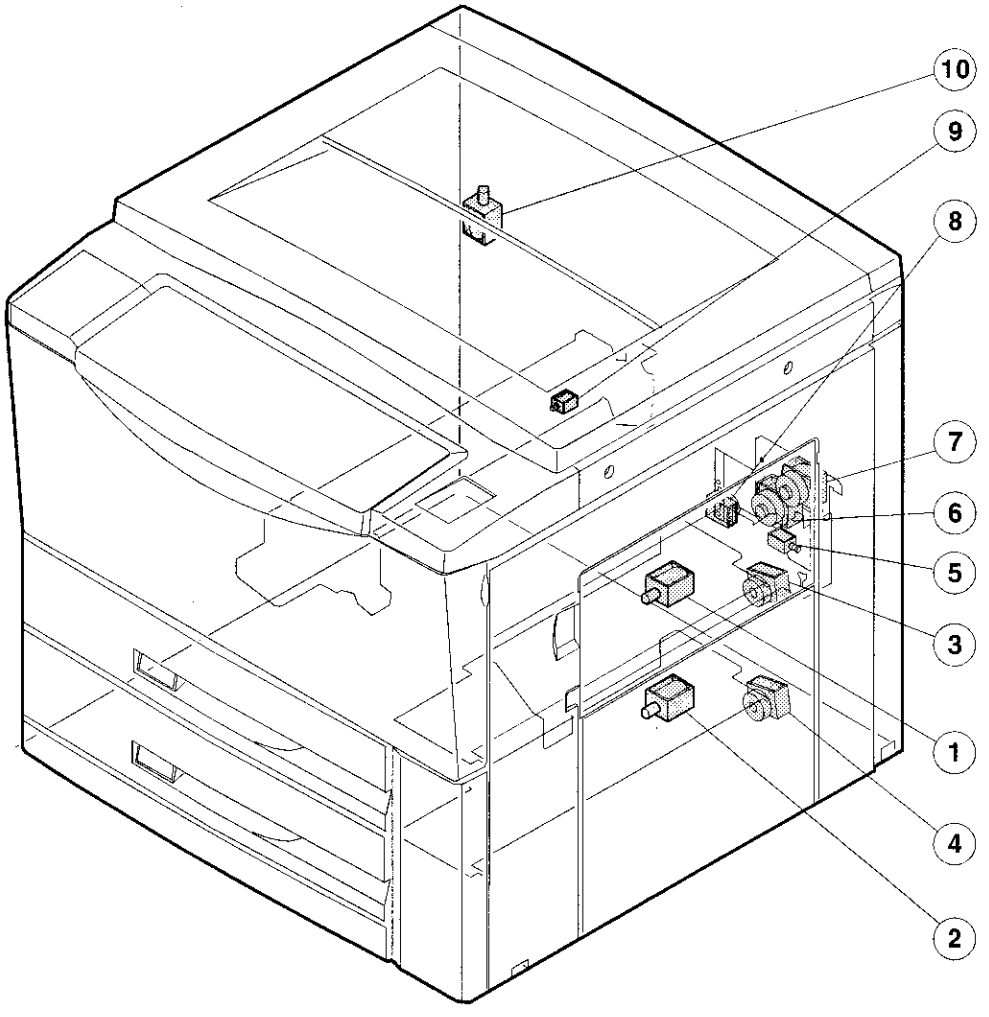
①	COVERS key and indicator	②	CENTER ERASE key and indicator	③	EDGE ERASE key and indicator
④	MARGIN SHIFT key and indicator	⑤	DUAL PAGE COPY key and indicator	⑥	AUTO IMAGE key
⑦	COPY RATIO display	⑧	ZOOM keys	⑨	Message display
⑩	Paper required indicator	⑪	Misfeed indicator	⑫	SCROLL DISPLAY key
⑬	Copy quantity display	⑭	PROGRAM ([P]) key	⑮	INTERRUPT key and indicator
⑯	CLEAR ALL ([CA]) key	⑰	POWER SAVE indicator	⑱	SORTER key and indicators
⑲	ORIGINAL TO COPY key and indicators	⑳	LIGHT and DARK keys and indicators	㉑	EXPOSURE key and indicators
㉒	Reduction ([ ]) key	㉓	Enlargement ([ ]) key	㉔	100% key
㉕	ORIGINAL SIZE indicators	㉖	ORIGINAL SIZE ENTER key	㉗	AUTO PAPER SELECT indicator
㉘	PAPER SIZE indicators	㉙	TRAY SELECT key	㉚	Paper feed location/misfeed location indicators
㉛	10-key pad	㉜	AUDIT CLEAR ([0/◇]) key	㉝	Clear ([C]) key
㉞	START key and indicator				

3. Internal view



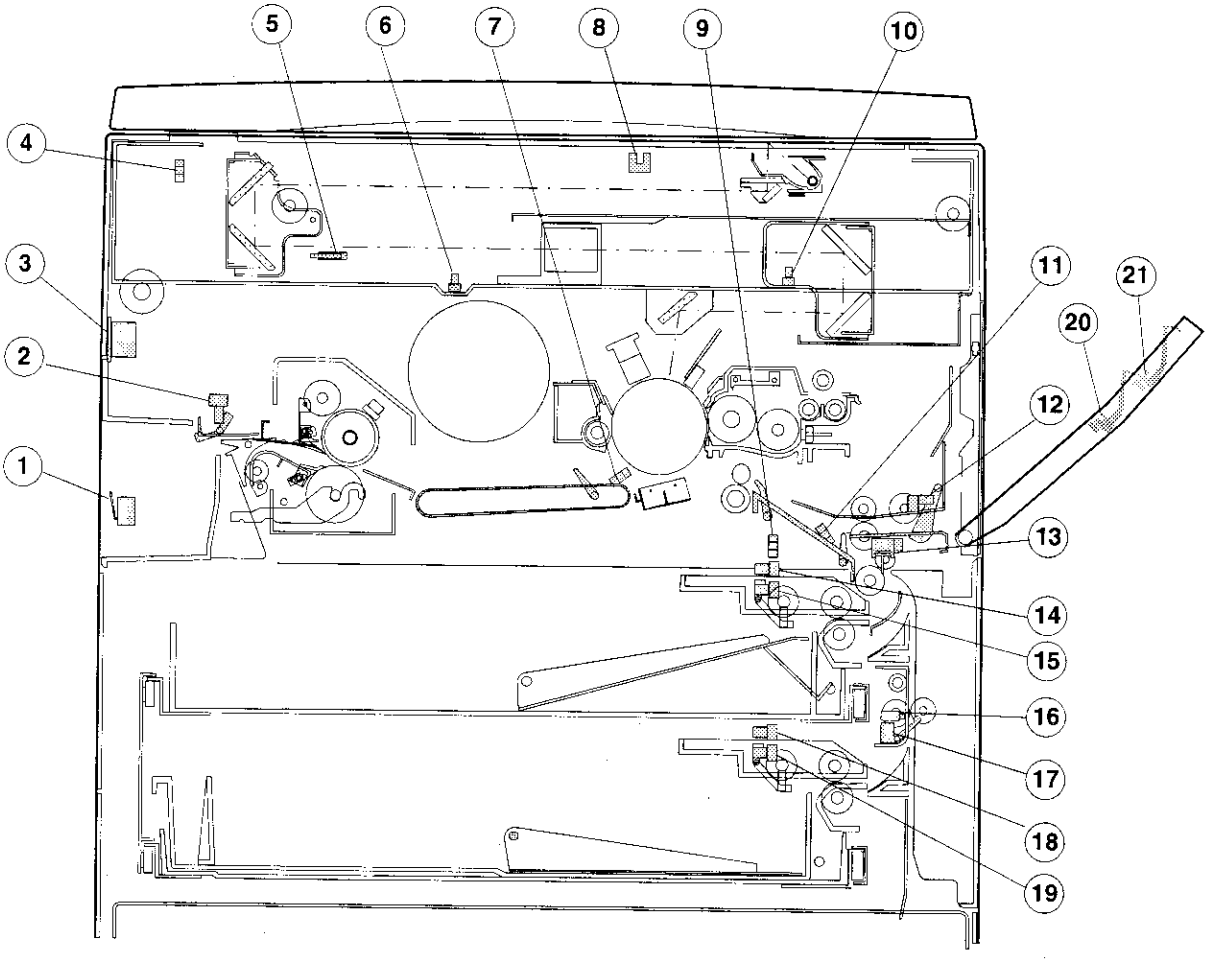
①	#2 mirror	②	#3 mirror	③	#1 mirror
④	Copy lamp	⑤	Lens unit	⑥	Main corona unit
⑦	Blank lamps	⑧	#6 mirror	⑨	#4 mirror
⑩	#5 mirror	⑪	—	⑫	Developing tank
⑬	Resist roller	⑭	Transfer corona	⑮	Drum
⑯	Separation corona	⑰	Drum separator pawl	⑱	Cleaner unit
⑲	Suction unit	⑳	Suction belts	㉑	Upper heat roller
㉒	Lower heat roller	㉓	Heater lamp	㉔	Lower separator pawl
㉕	Upper separator pawl	㉖	Upper cleaning roller	㉗	Fuser thermistor
㉘	Delivery select gate	㉙	Manual feed takeup roller	㉚	Manual feed paper feed roller
㉛	Counter manual feed roller	㉜	Transport roller (upper)	㉝	Transport roller (lower)
㉞	Upper paper feed roller	㉟	Upper paper feed reverse roller	㊱	Upper paper takeup roller
㊲	Lower paper feed roller	㊳	Lower paper feed reverse roller	㊴	Lower paper takeup roller
㊵	Lower cleaning roller				

4. Clutches, solenoids



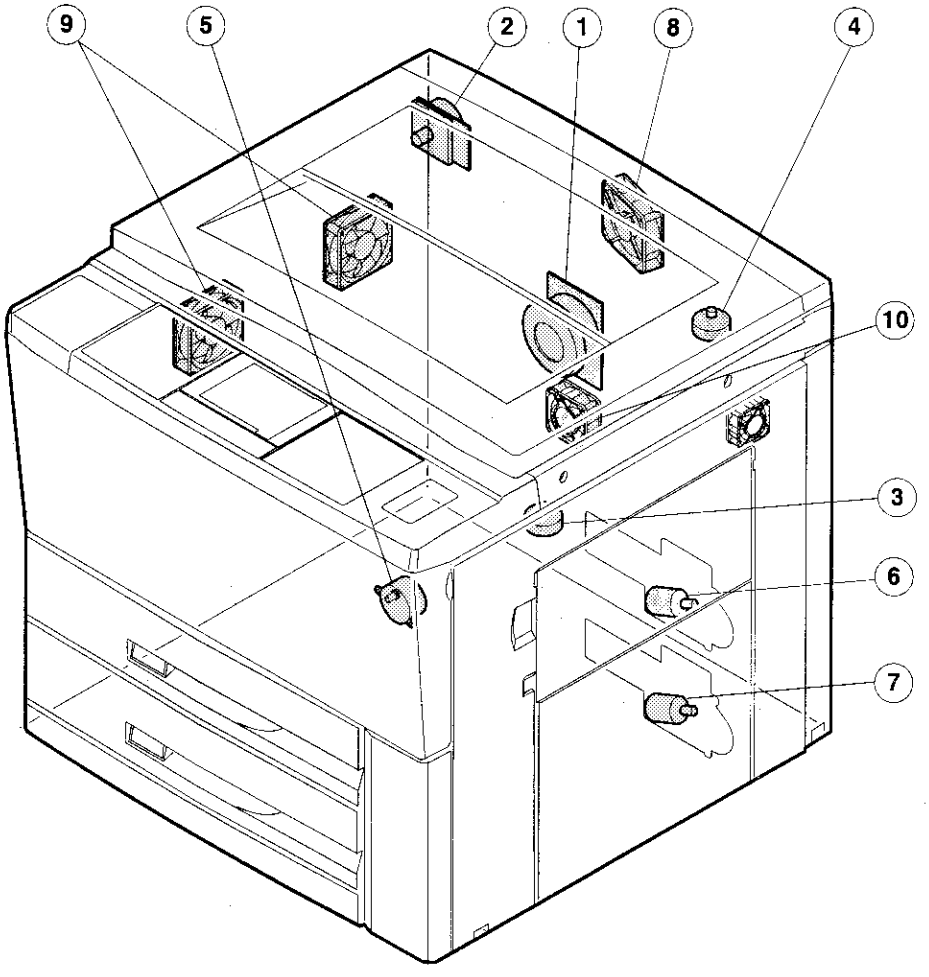
	Signal name	Name	Function
①	CPFS1	Upper cassette paper feed solenoid	For tensioning takeup roller
②	CPFS2	Lower cassette paper feed solenoid	For tensioning takeup roller
③	CPFC1	Upper cassette paper feed clutch	For actuating paper feed roller
④	CPFC2	Lower cassette paper feed clutch	For actuating paper feed roller
⑤	MPFS	Manual paper feed solenoid	For tensioning takeup roller
⑥	TRCL	Transport roller clutch (low)	For actuating transport roller (low)
⑦	TRCH	Transport roller clutch (fast)	For actuating transport roller (fast)
⑧	RRC	Resist roller clutch	For actuating resist roller
⑨	PSPS	Paper separation solenoid	For actuating paper separation solenoid
⑩	DGS	Duplex copy gate solenoid	For actuating duplex copy gate

5. Sensors



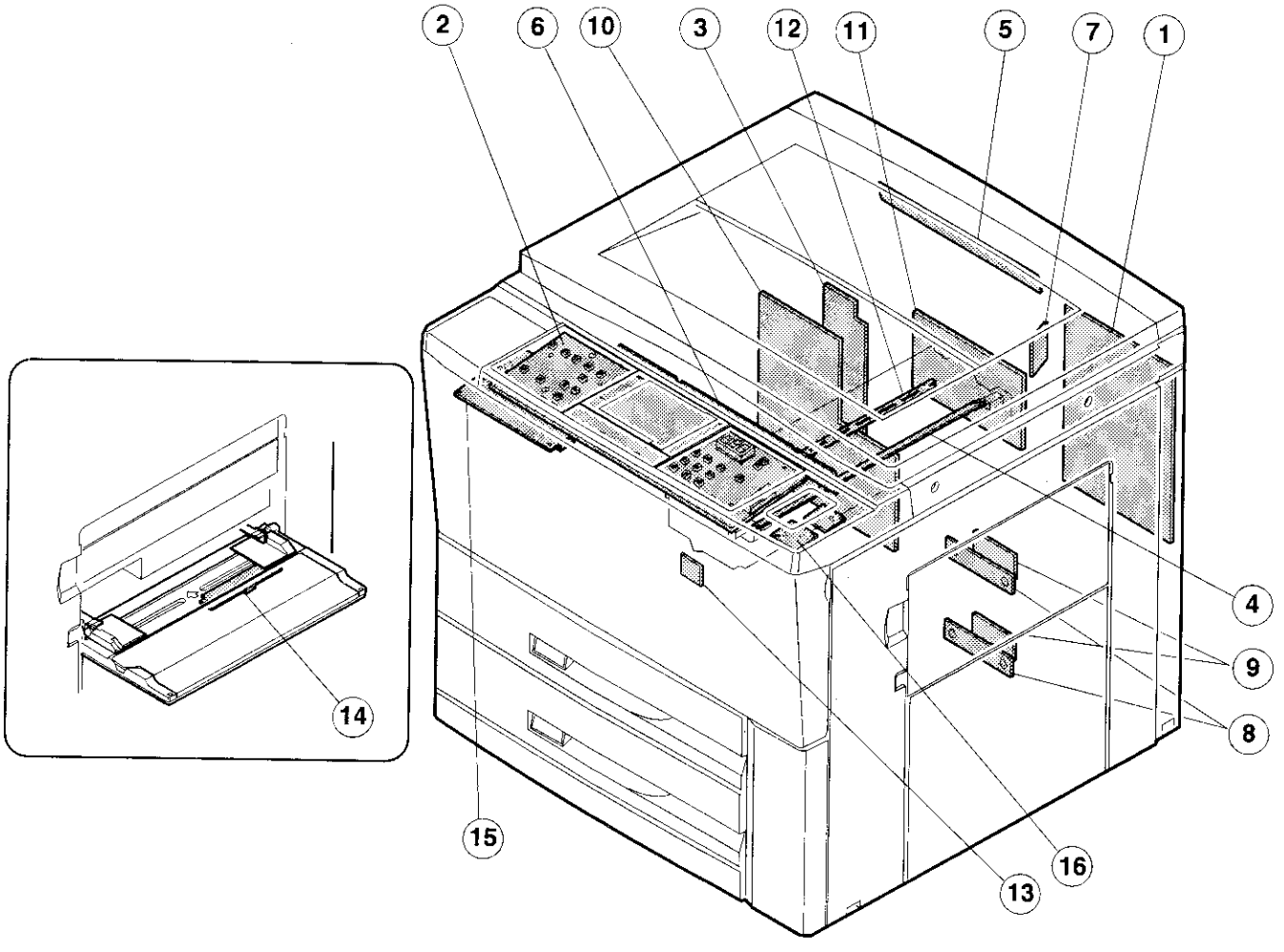
	Signal name	Type	Name	Output
①	CSWL	Microswitch	Cover switch, (left)	On when closed
②	POD	Transmssive photosensor	Paper exit sensor	Low when paper passes over
③	P-SW	See-saw switch	AC power switch	—
④	MHPS	Transmissive photosensor	Mirror home position sensor	High when scanner at home postion
⑤	CSWF	Microswitch	Cover switch, (front)	On when closed
⑥	LHPS	Transmissive photosensor	Lens home position sensor	Low when lens at home postion
⑦	PSD	Transmissive photosensor	Paper separation sensor	High when paper passes over
⑧	OCSW	Transmissive photosensor	Original cover switch	Low when cover is open
⑨	PPD2	Transmissive photosensor	Paper transport sensor	Low when paper passes over
⑩	MBHPS	Transmissive photosensor	Mirror home position sensor	Low when mirror at home position
⑪	PPD1	Transmissive photosensor	Paper transport sensor-1	Low when paper passes over
⑫	PED1	Transmissive photosensor	Manual feed paper sensor	Low when paper passes over
⑬	TFD	Transmissive photosensor	Full waste toner sensor	Low when full waste toner detected
⑭	LUD1	Transmissive photosensor	Upper cassette liftup sensor	Low when lift plate detected
⑮	PED2	Transmissive photosensor	Upper cassette paper sensor	Low when paper detected
⑯	CSWR	Microswitch	Doorswitch (right)	On when closed
⑰	PID	Transmissive photosensor	Paper transport sensor	High when paper passes over
⑱	LUD2	Transmissive photosensor	Lower cassette liftup sensor	Low when lift plate detected
⑲	PED3	Transmissive photosensor	Lower cassette paper sensor	Low when paper detected
⑳	PLS1	Transmissive photosensor	Manual tray paper length sensor	Low when detected
㉑	PLS2	Transmissive photosensor	Manual tray paper length sensor (Inch series only)	Low when detected

6. Motors



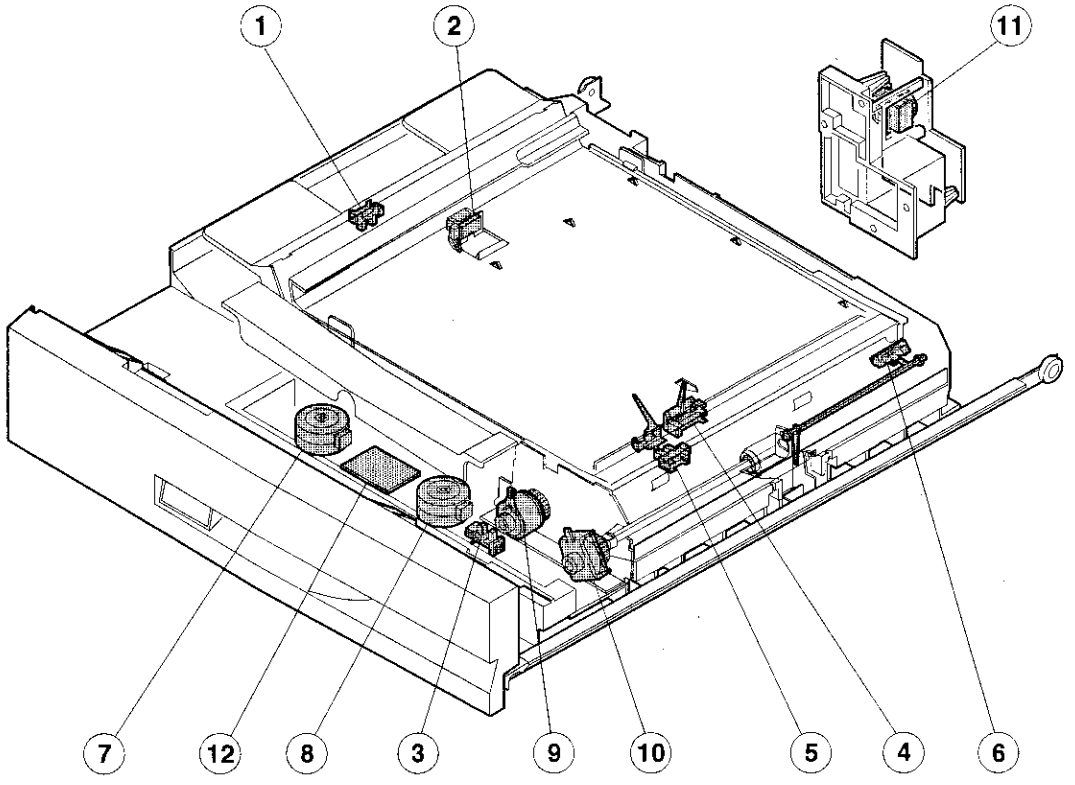
	Signal name	Name	Type	Function
①	MM	Main motor	DC, brushless	Driving copier and ADU option
②	SM	Mirror motor	DC, brushless	Driving optical system mirror bases A and B
③	LEM	Lens motor	DC, stepping	Driving optical lens
④	MBM	#4/5 mirror base motor	DC, stepping	Driving optical mirror base C
⑤	TM	Toner motor	DC, synchronous	Supplying toner
⑥	LUM1	Upper cassette liftup motor	DC, brush	Lifting upper paper feed cassette baseplate
⑦	LUM2	Lower cassette liftup motor	DC, brush	Lifting lower paper feed cassette baseplate
⑧	CFM	Cooling fan motor	DC, brushless	Cooling optical system
⑨	VFM	Ventilation fan motor	DC, brushless	Ventilating fuser area
⑩	SFM	Suction fan motor	DC, brushless	Ventilating process unit area aid in paper transport

7. Board list



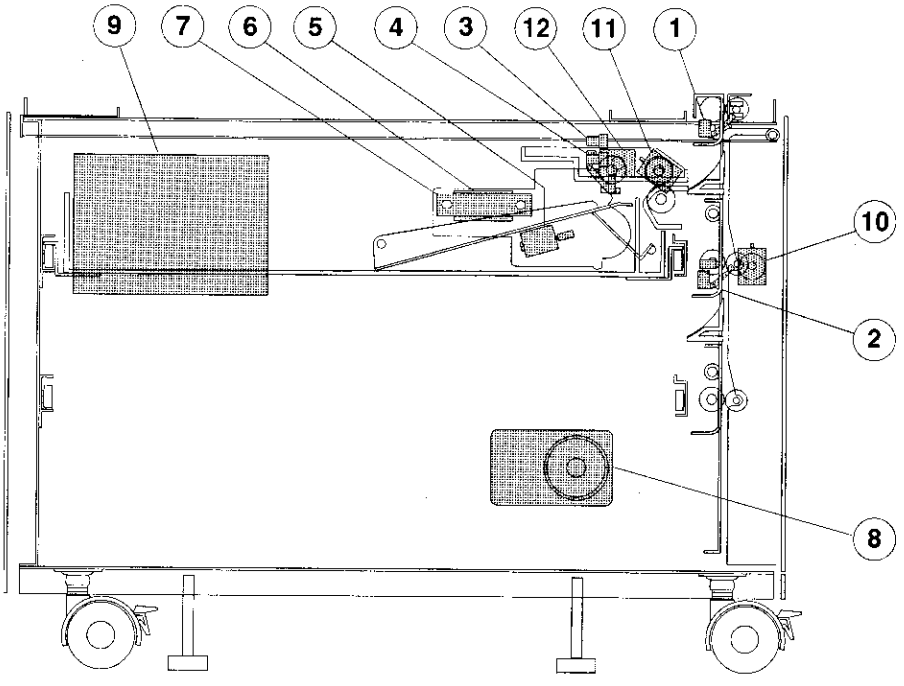
	Name	Type	Function
①	Main PWB	Japan/Export	Primary control of copier functions
②	Operation PWB	Common	Display
③	AC PWB	Japan/Export, 100V/200V	Supplying AC power
④	Blank lamp PWB	Common	Controlling blank lamps
⑤	Original sensing light emitting PWB	Japan	Sensing original size
⑥	Original sensor light receive PWB	Japan	Sensing original size
⑦	AE PWB	Common	Automatic exposure sensor
⑧	Cassette paper size PWB	Common	Sensing cassette paper size
⑨	Liftup motor PWB	Common	Driving paper cassette bottom plate liftup
⑩	DC power supply unit	100V/200V series	Supplying DC power
⑪	High voltage transformer	Common	Supplying process unit high voltage and developing bias voltage
⑫	Discharge lamp	Common	Driving discharge lamps
⑬	Process control VR PWB	Common	Process sensor sensitivity adjustment
⑭	Manual feed paper size sensor PWB	Japan/Export	Paper size detection (Japan, portrait only)
⑮	LCD control PWB	Japan/Export	LCD display drive/control
⑯	LCD invertor PWB	Common	LCD power invertor circuit

8. Duplex copy tray



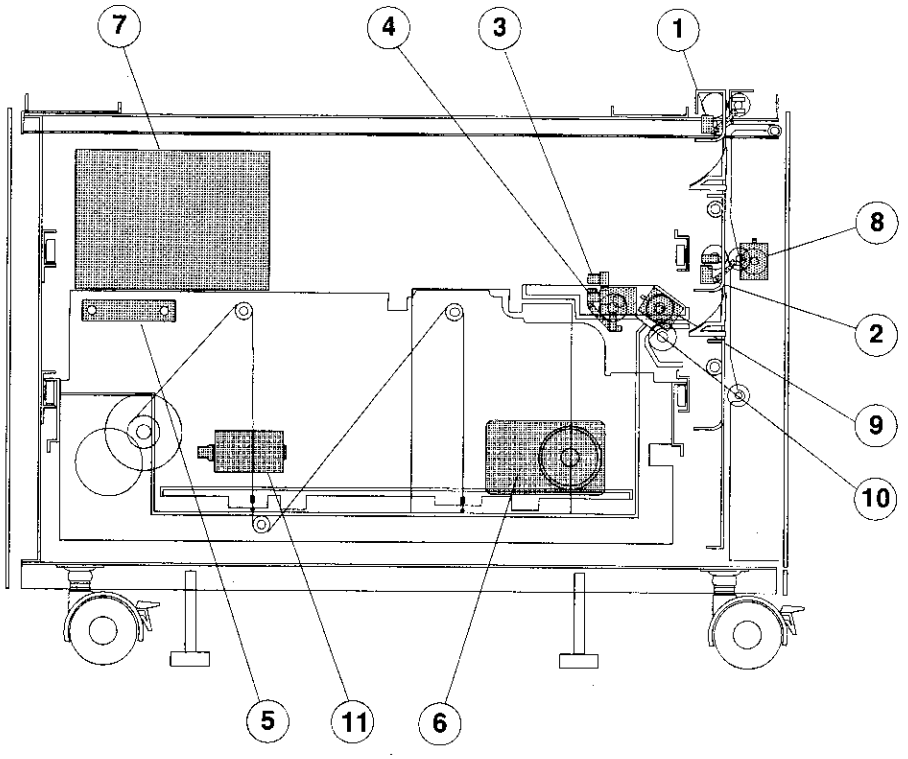
	Signal name	Type	Name	Output
①	APHPS2	Transimissive photosensor	ADU rear plate home position sensor	Low when at home position
②	DPPD1	Transimissive photosensor	ADU paper transport sensor-1	High when paper passes over
③	APHPS1	Transimissive photosensor	ADU alignment plate home position sensor	Low when over home position
④	DPPD2	Transimissive photosensor	ADU paper transport sensor-2	High when paper detected
⑤	DTPID	Transimissive photosensor	ADU tray sensor	High when paper detected
⑥	DPFD	Transimissive photosensor	ADU paper entry sensor	High when paper detected
⑦	PAM2	DC stepping motor	ADU rear plate motor	
⑧	PAM1	DC stepping motor	ADU alignment plate motor	
⑨	DPFC	Magnetic clutch	ADU paper feed clutch	
⑩	DRRC	Magnetic clutch	ADU counter roller clutch	
⑪	DDC	Magnetic clutch	ADU clutch	
⑫	ADUPWB	Duplex copy tray load driving	Diode PWB	

9. Desk unit (SF-D20)



	Signal name	Name	Function
①	DPOD1	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
②	DPOD2	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
③	DLUD1	Desk cassette liftup sensor	Cassette liftup sensor (Low when lift plate detected)
④	DPED1	Desk cassette paper sensor	Cassette paper sensor (Low when paper detected)
⑤	DLUM1	Desk cassette liftup motor	Cassette liftup drive motor
⑥	—	Liftup motor PWB	—
⑦	—	Cassette paper size PWB	—
⑧	DM	Desk drive motor	Desk main motor
⑨	—	Desk main PWB	—
⑩	DTRC	Desk transport roller clutch	Transport roller drive
⑪	DPFC1	Desk paper feed clutch	Paper feed roller drive
⑫	DPFS1	Desk paper feed solenoid	Paper takeup roller drive

10. Desk unit (SF-D21)



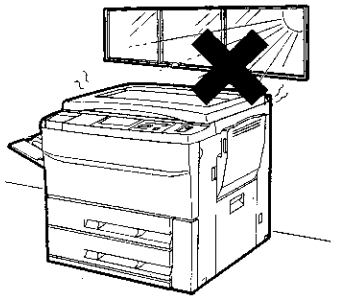
	Signal name	Name	Function
①	DPOD1	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
②	DPOD2	Desk paper exit sensor	Paper exit sensor (High when paper passes over)
③	DLUD2	Desk cassette liftup sensor	Cassette liftup sensor (Low when lift plate detected)
④	DPED2	Desk cassette paper sensor	Cassette paper sensor (Low when paper detected)
⑤	—	Cassette paper size PWB	—
⑥	DM	Desk drive motor	Desk main motor
⑦	—	Desk main PWB	—
⑧	DTRC	Desk transport roller clutch	Transport roller drive
⑨	DPFC2	Desk paper feed clutch	Paper feed roller drive
⑩	DPFS2	Desk paper feed solenoid	Paper takeup roller drive
⑪	LCCM	Large capacity cassette motor	Cassette tray liftup drive motor

[5] INSTALLATION

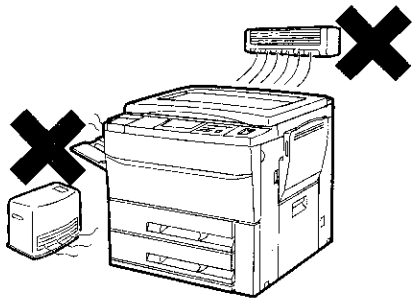
A. Installing conditions

To ensure safety and proper machine performance, please note the following before initial installation and whenever the machine is to be relocated.

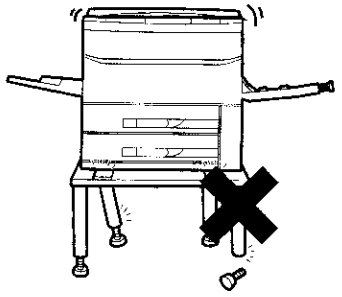
1. The copier should be installed near an accessible power outlet for easy connection.
2. Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements.
   Also make certain the outlet is properly grounded.
3. Do not install the machine where it is:
   - damp or humid,
   - exposed to direct sunlight,



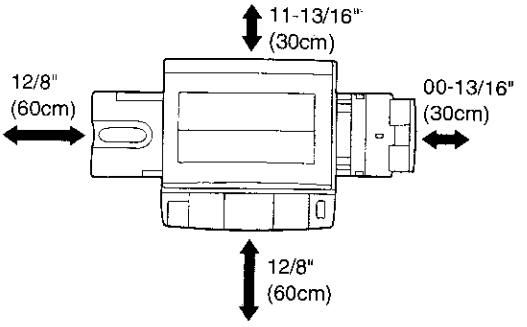
   - extremely dusty,
   - poorly ventilated,
   - subject to extreme temperature or humidity changes (e.g., near an air conditioner or heater).



4. Ensure that the area chosen for the machine location is level.



5. Be sure to allow the required space around the machine for servicing and proper ventilation.



A small amount of ozone is produced within the copier during operation.
The emission level is insufficient to cause any health hazard.
NOTE:
The present recommended long term exposure limit for ozone is 0.1 ppm (0.2 mg/m^3) calculated as an 8 hr. time-weighted average concentration.
However, since the small amount that is emitted may have an objectionable odor, it is advisable to place the copier in a ventilated area.

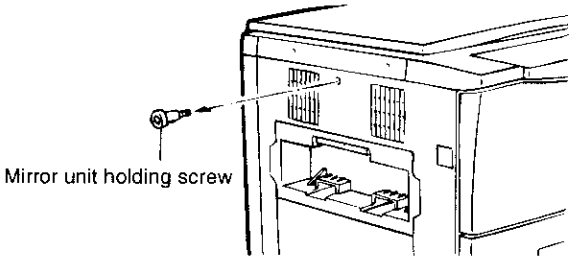
B. Installation procedure

(1) SF-2030

1. Releasing optical locks

A. Removing the #2/3 mirror unit lock

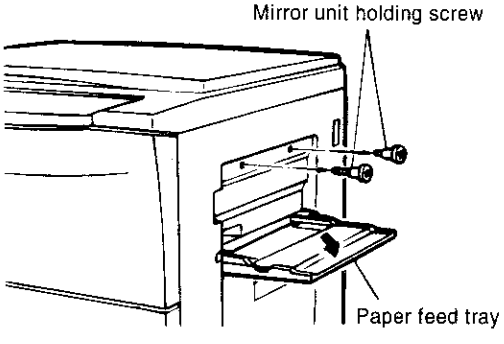
Unfasten the screw that holds the #2/3 mirror unit on the left side of the machine.



B. Releasing the lens and #4/5 mirror unit from lock

Open the paper feed tray and remove two screws that hold the #4/5 mirror unit.

Close the manual tray.

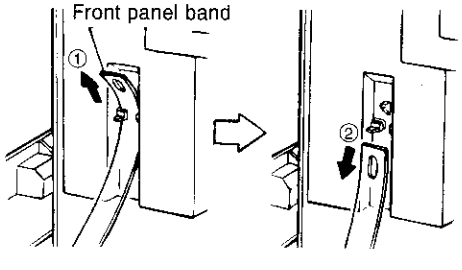


2. Fuser unit set up

A. Removing the fuser unit

① While holding up the paper exit handle, open the paper exit cover.

② Remove the front panel band on the left side of the front panel in a manner shown in the figure.

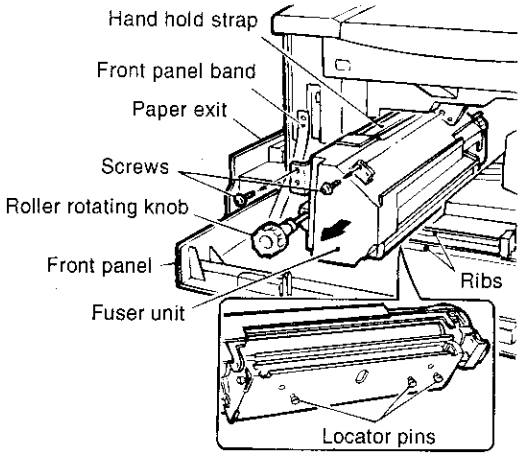


③ Remove the fuser unit holding two screws.

④ Hold the fuser unit rotating knob. Push on the front panel and gently remove the fuser unit.

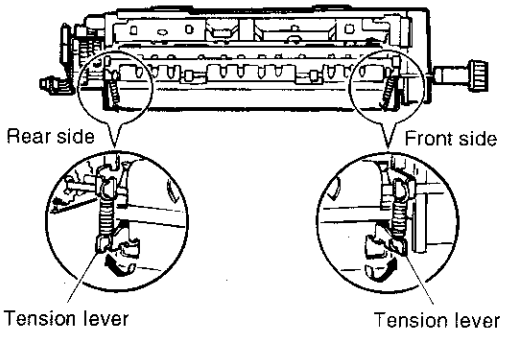
Do not let the locator pins under the fuser unit hit the ribs on the front cover.

⑤ Hold the fuser unit hand carry strap and remove the fuser unit.



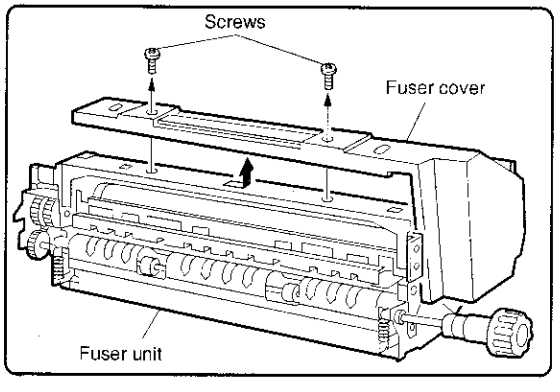
B. Tensioning the heat roller

Move the tension levers on both sides of the fuser unit to the position shown in the figure. With this, tension is applied to the upper and lower heat rollers.



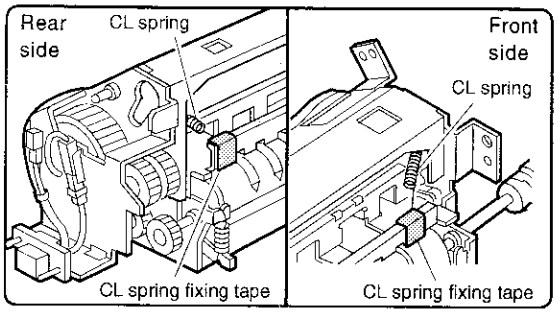
C. Installing the cleaning roller

① Remove the fusing cover fixing screws (2 pcs.), slide the fusing cover towards you, and remove it.



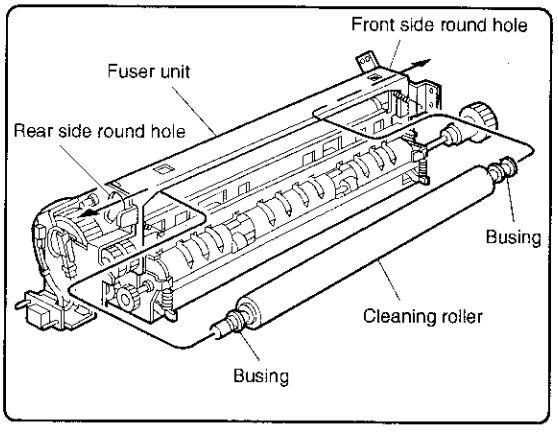
② Remove the CL springs which are fixed to the front and the rear side of the fusing unit with adhesive tape.

[Note] Slowly and surely remove the adhesive tape.



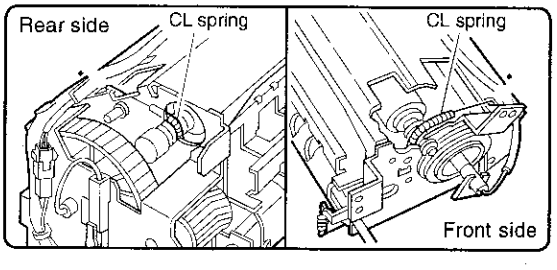
③ Pass the cleaning roller through the round hole at the back of the fusing unit, then insert the cleaning roller into the round hole at the front.

Then position the bearings at the front and the back of the cleaning roller.

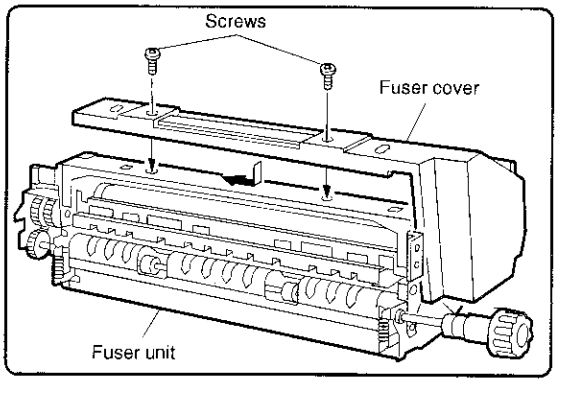


④ Hang the Cl springs on the front and the rear frames of the fusing unit. (Shown with arrow ←.)

Be sure to check that the CL springs are pressing the bearings as shown in the figure.



⑤ Replace the fuser cover removed in Step 1, and fasten it with two screws.



D. Installing the fusing unit

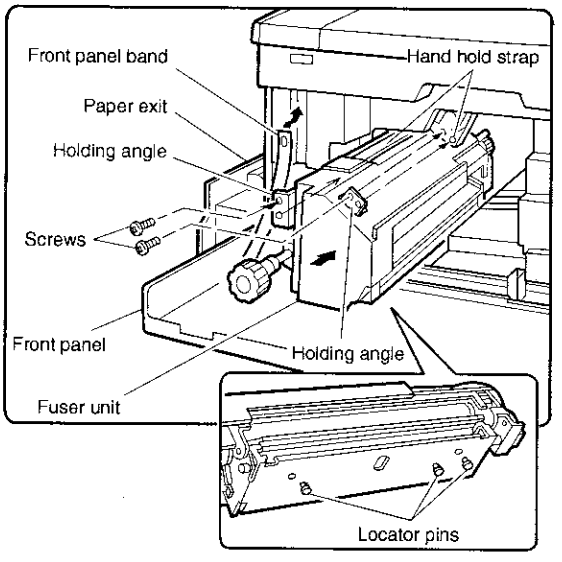
Insert the locator pin under the fuser unit into slot. Gently push fuser unit all the way in.

Make sure now that the locator pins of the copier are firmly engaged into two locator holes of the fuser unit mounting bracket.

Secure fuser unit with two screw removed in ② of **A**, and close the paper exit.

Replace the front panel band that removed in ① of **A**.

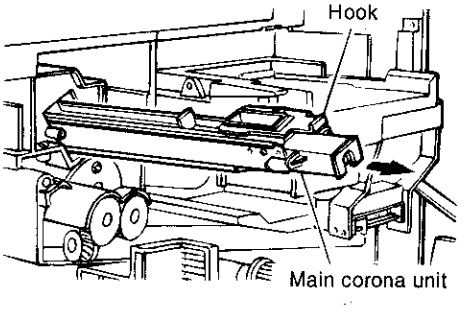
Close the paper exit cover.



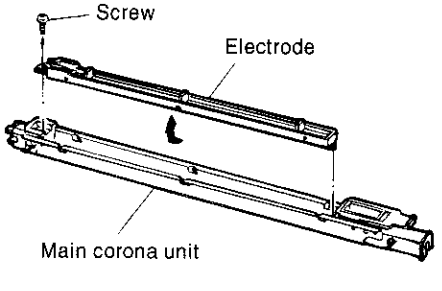
3. Cleaning corona units

A. Clean the main corona unit

① Push down the hook of the main corona unit while removing the main corona unit from the copier.



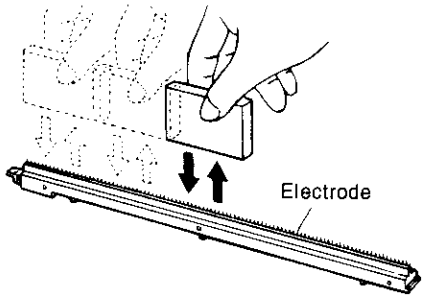
② Unfasten the one screw holding the electrode on the back of the main corona unit and remove the electrode.



③ Very carefully clean the top of the electrode using the repeat this procedure a few times.

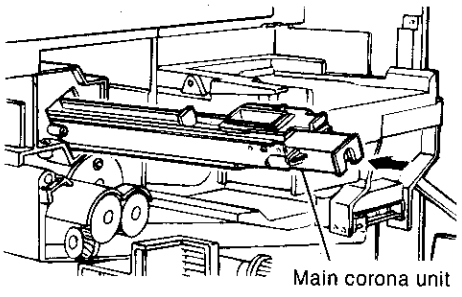
NOTES:

- Never move the cleaner in any direction except up and down when the cleaner is in contact with the electrode.
- Be sure to clean away the whole area evenly. Never clean only a portion of the electrode.



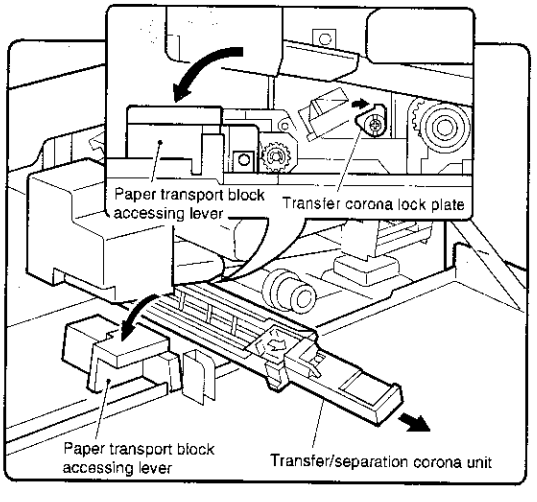
④ Install the electrode and secure it with the one screw.

⑤ Insert the main corona unit all the way into machine. Guides must be inserted into proper slots.

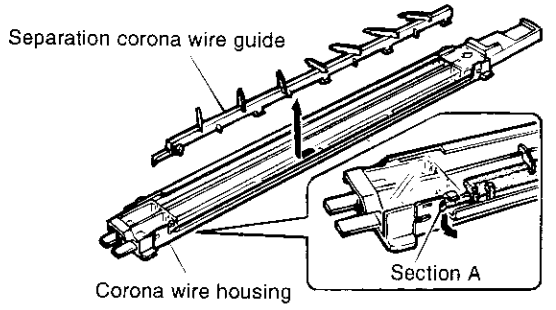


B. Clean the transfer/separation corona wires

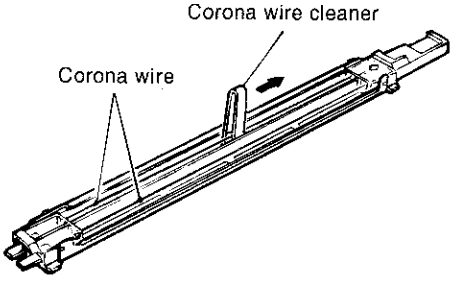
① Tilt the paper transport block accessing lever to left. Rotate the transfer corona lock plate clockwise using the scale or flat tip screwdriver to release it from the lock. Remove the transfer/separation corona unit from the copier.


Paper transport block accessing lever
Transfer corona lock plate
Paper transport block accessing lever
Transfer/separation corona unit

② Unhook the section A of the separation corona guide, slide the separation corona in the direction of the arrow, and remove the separation corona guide from the corona housing.

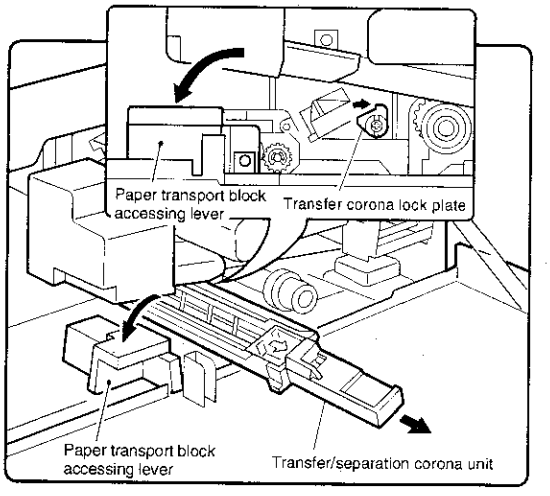


③ Squeeze the transfer/corona wire with the corona wire cleaner. Move the cleaner in the direction of the arrow to clean the wire.



④ Install the separation corona guide to the corona housing. Insert the corona assembly along the guide of the transfer/separation corona unit.

Rotate the transfer corona lock plate counterclockwise, return the paper transport block accessing lever clockwise, and close the front panel.


Paper transport block accessing lever
Transfer corona lock plate
Paper transport block accessing lever
Transfer/separation corona unit

4. Installing accessories

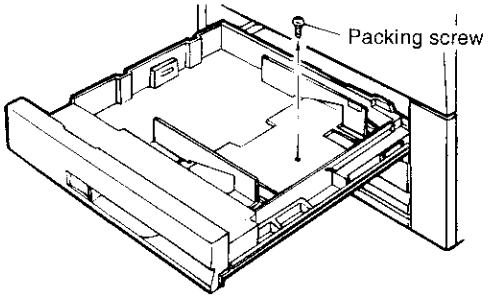
A. Install the copy receive tray

5. Setting up the upper paper cassette

A. Remove the packing screw of the cassette.

Pull out the cassette drawer by lifting while pulling out drawer.

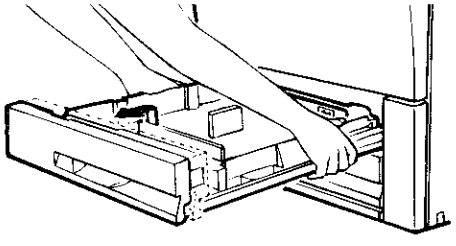
Remove the one packing screw that secures the paper tension plate of the cassette.



In the case of the B5R cassette, it has been set at the factory.

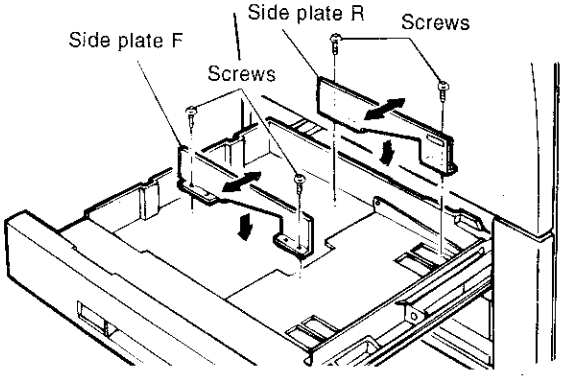
B. Removing the cassette

Hold up the cassette grasping the both sides of the cassette and pull it all the way out.



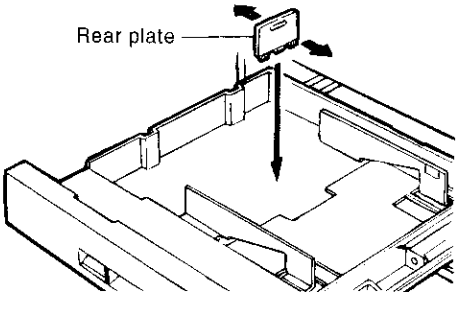
C. Change the size using the side plates F and R.

Remove two screws that hold the side plates F and R. Set the plates into their position shown with notches, and secure with the two screws.



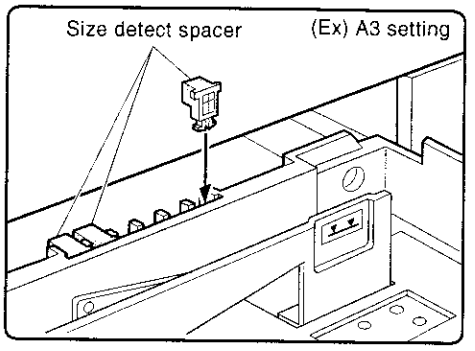
D. Insert the rear plate

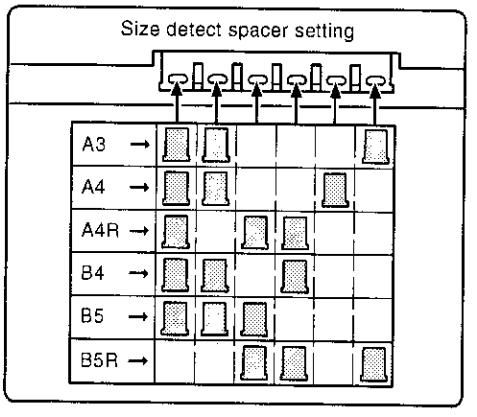
Remove the rear plate and set the plate into the position indicated for the desired paper sixe.



E. Set the size detect spacer

Change the position of the size detect spacer. Move the spacer to the appropriate positions.

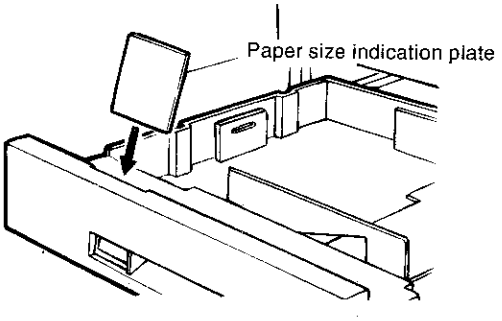


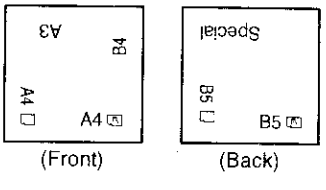


F. Change the paper size indication plate

Remove the paper size indication plate. Install the plate so the size of the paper can be seen from the window.

Paper sizes are printed on the front and the back of the paper size indicator plate.

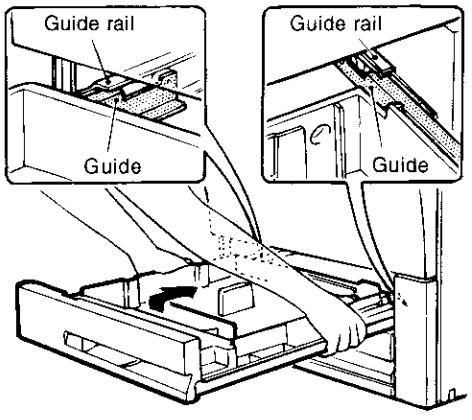




G. Set the cassette

Hold up both sides of the cassette from back and insert it along the guide rails.

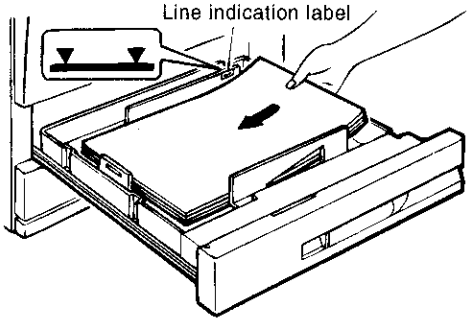
Ensure the cassette moves in and out smoothly.



H. Load paper

Load paper in the cassette, but not above the maximum line.

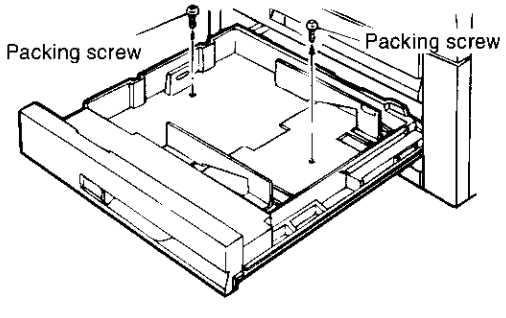
Insert the cassette all the way into the machine.



6. Set up the lower paper cassette

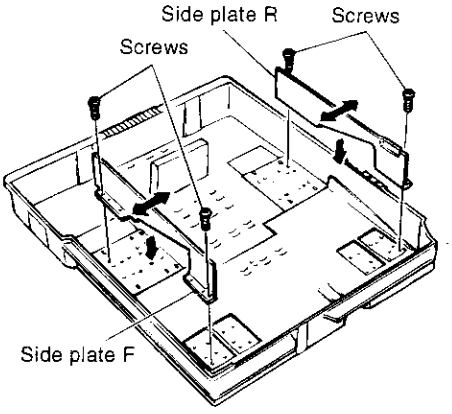
A. Remove the packing screw of the cassette.

Remove the two packing screw that hold the paper tension plate of the cassette.



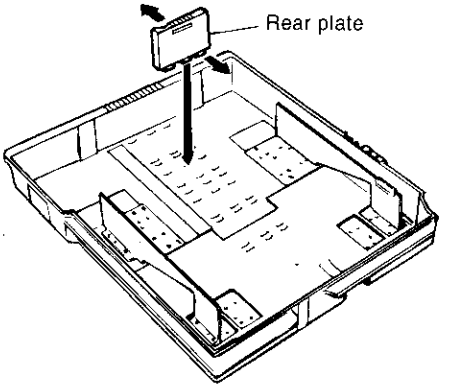
B. Change the size using the side plates F and R. (set to A3 position at the factory.)

Set the plates into the appropriate positions and secure wach plate with two screws.



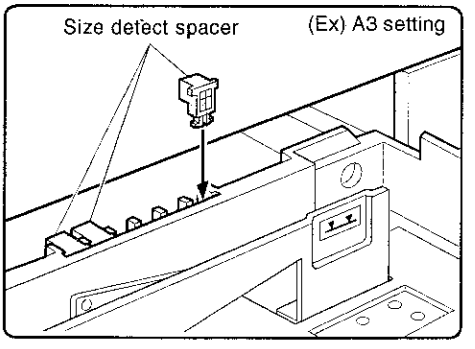
C. Change the size of the rear plate.

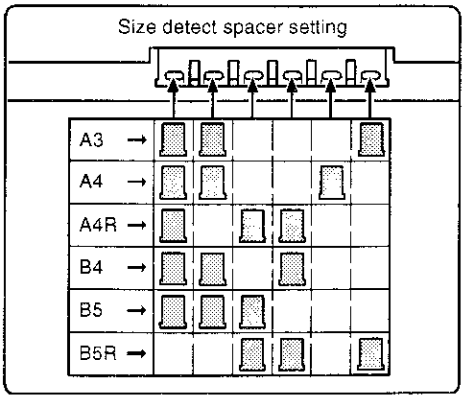
Remove the rear plate. Set the plate into the position indicated for the desired paper size.



D. Set the size detect spacer

Change the position of the size detect spacer. Move the size detect spacers to the appropriate positions.

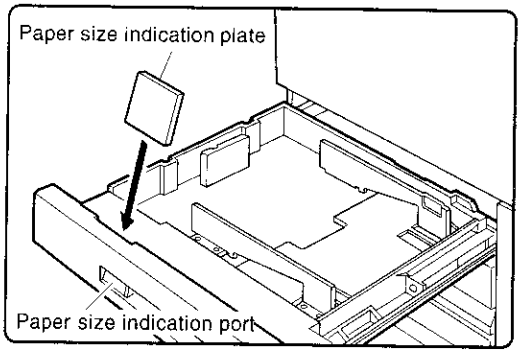


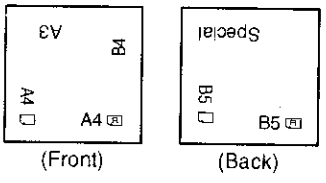


E. Change the paper size indication plate

Remove the paper size indication plate. Install the plates so the size of the paper can be seen from the window.

Paper sizes are printed on the front and the back of the paper size indicator plate.

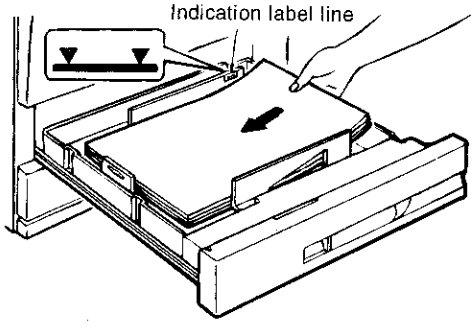




F. Setting paper

Set paper on the cassette. Do not load so much paper that exceeds the indication line.

Insert the cassette completely into the copier body.

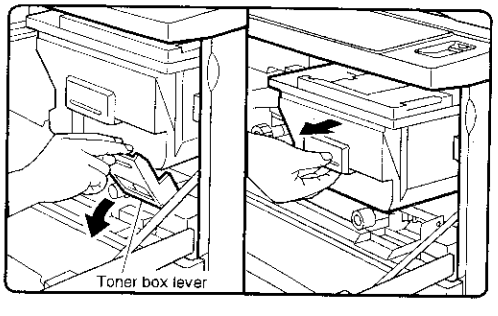


7. Lens lock release

A. Removing the lens and releasing the lens lock

① Open the front cabinet.

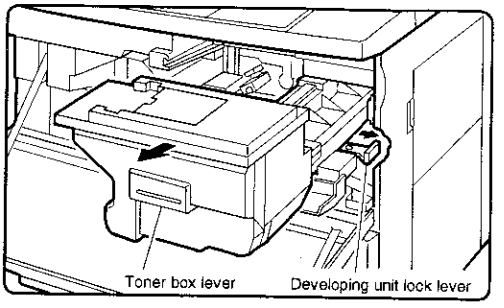
② Tilt down the toner box lever and pull out the toner box until it stops.



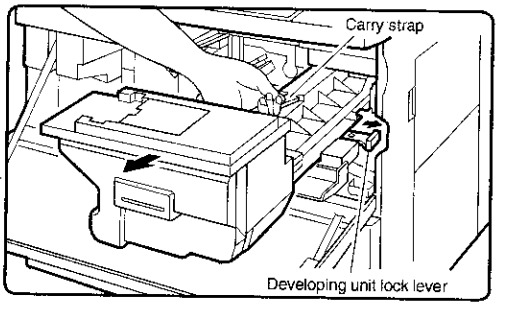
③ Slide the developing unit lock lever in the arrow direction to release lock, and hold the toner box lever and pull out the developing unit until it stops.

[Note]

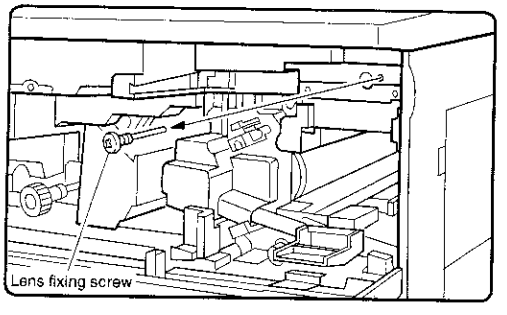
- When lock is released and the developing unit becomes free to move, let go of the developing unit lock lever.



④ Hold the carry strap of the developing unit and slide the developing unit lock lever in the arrow direction to release lock. Then remove the developing unit.



⑤ Remove the lens fixing screw (1 pc.) under the operation panel.

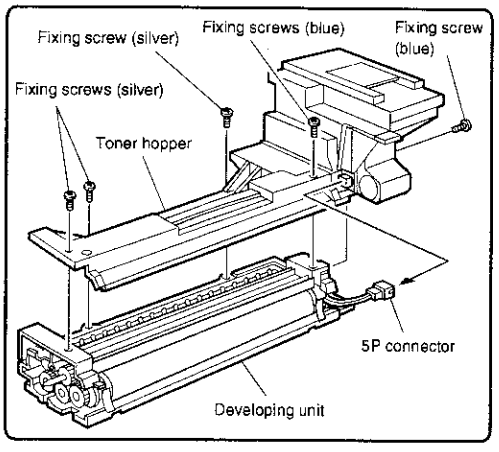


8. Setting the developing unit

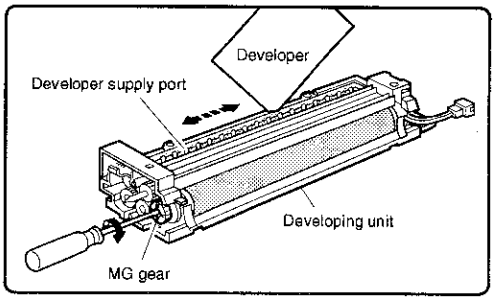
A. Supplying developer

① Remove the 5P connector which is connecting the toner hopper and the developing unit.

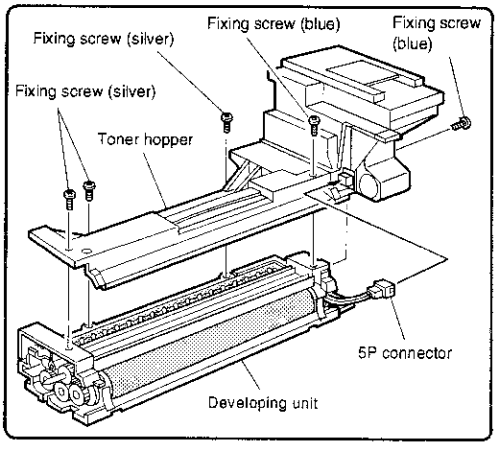
Remove the five toner hopper fixing screws (silver 3 pcs., blue 2 pcs.) of the developing unit, and remove the toner hopper.



② While supplying developer from the developer supply port of the developing unit, turn the MG gear clockwise with a screwdriver (+) or a scale to completely supply developer into the developing unit.



③ Install the toner hopper to the developing unit, and fix it with the five screws (silver 3pcs., blue 2 pcs.). Connect the 5P connecter of the developing unit with the toner hopper.

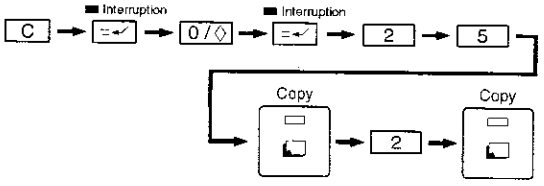


9. Toner density sensor level adjustment

Turn on the power switch of the copier body.

A. Developing unit level adjustment

① Perform the key operations of simulation 25.



② Simulation 25 will be completed in 3 minutes.

(Note) If the simulation is cancelled halfway, auto scanning cannot be performed. Do not cancel it halfway.

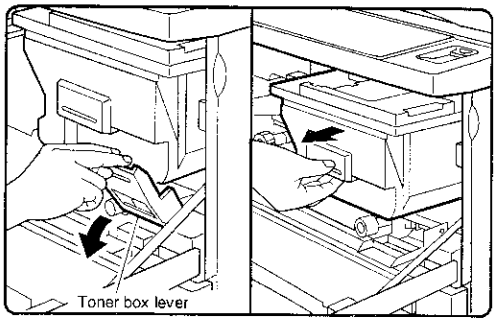
③ Cancel simulation 25 with the [CA] key.

10. Toner supply

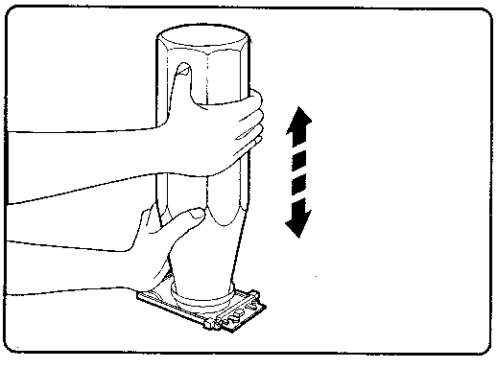
A. Toner supply

① Open the front cabinet.

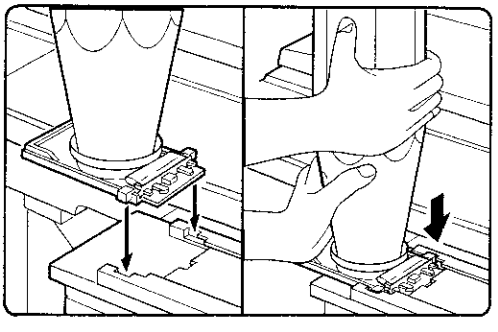
② Tilt down the toner box lever towards you and pull out the toner box until it stops.



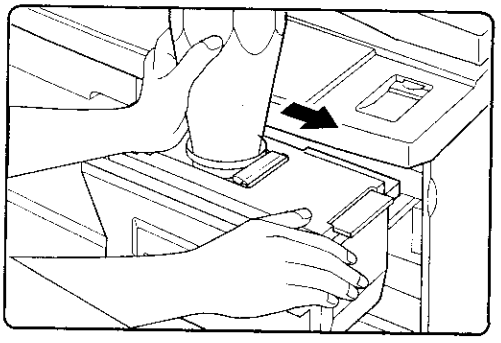
③ Shake the toner cartridge up and down about 20 times.



④ Install the toner cartridge to the toner box as shown in the figure below.



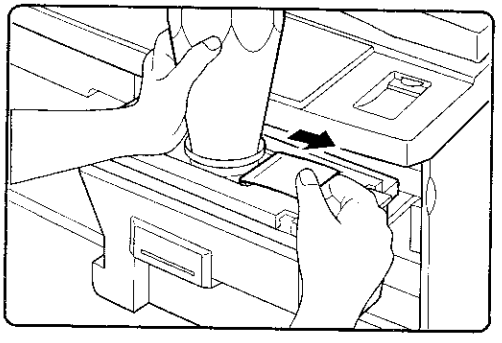
⑤ Move the toner cartridge in the arrow direction until it stops.



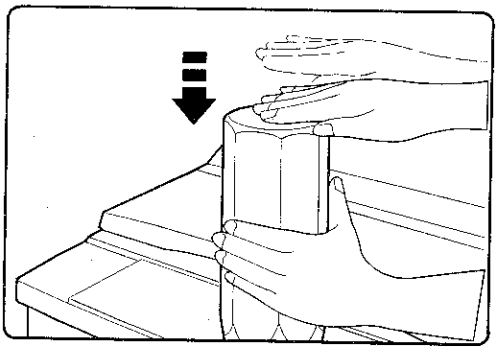
⑥ While holding the toner cartridge, pull the seal to supply toner.

[Note]

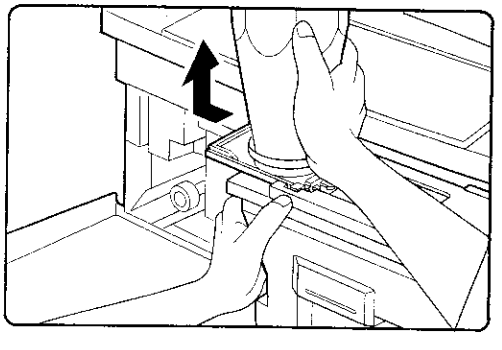
- It takes about 30 minutes to finish supplying toner.



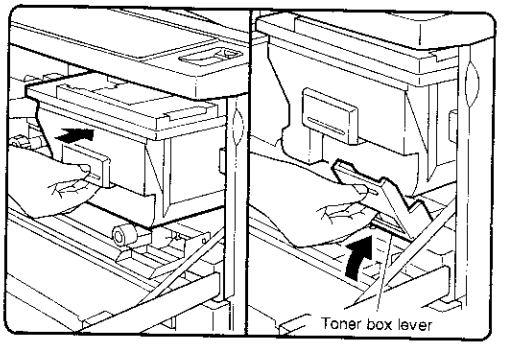
⑦ Tap the top of the toner cartridge to put down toner attached inside the toner cartridge.



⑧ Move the empty toner cartridge in the arrow direction to remove.



⑨ Push the toner box slowly to the original position, and lift the toner box lever.



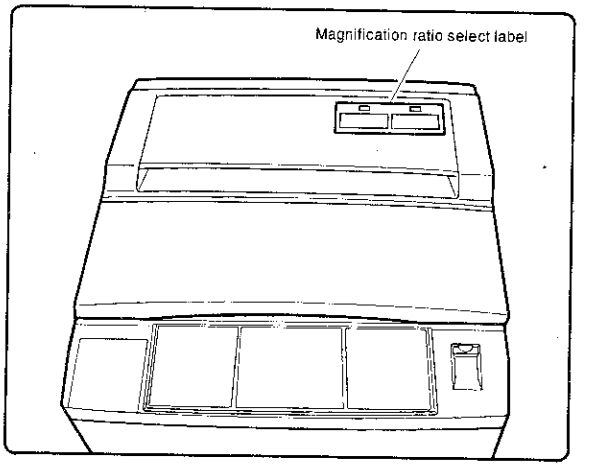
Toner supply is completed with the above procedure. Close the front cabinet.

11. Label attachment

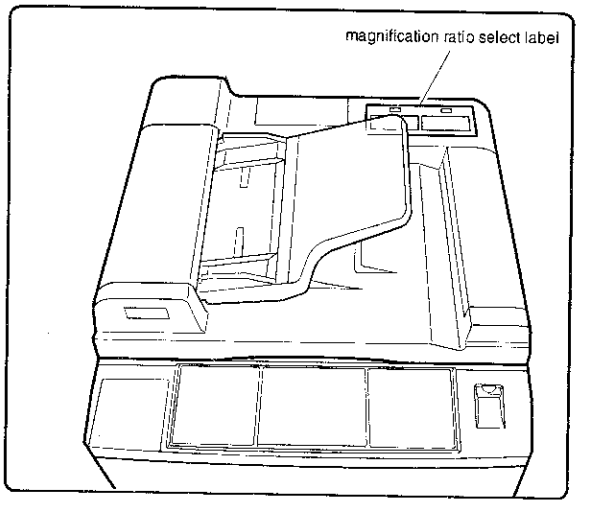
A. Label attachment

Attach the magnification ratio select label packed together with the Operation Manual to the position shown below.

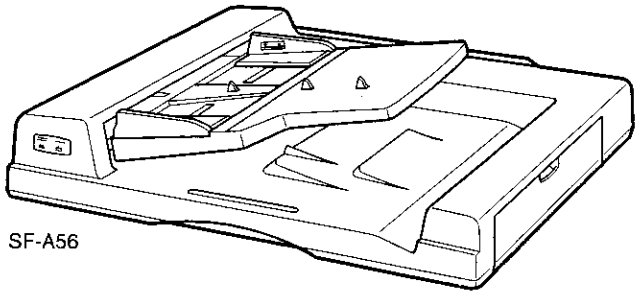
- When attaching to the copier with the original cover:



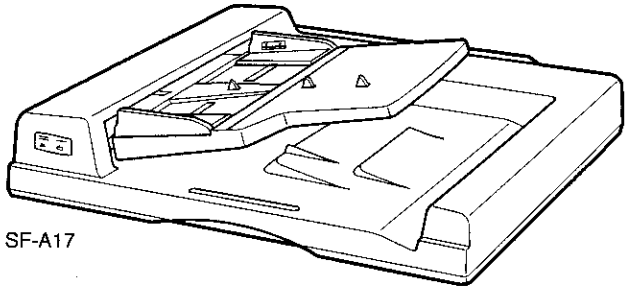
- When attaching to the auto document feeder:



(2) SF-A17/56

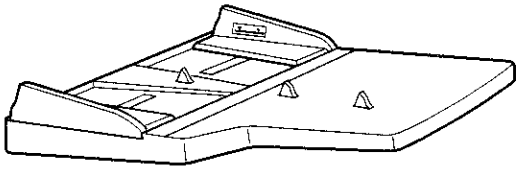


SF-A56

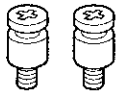


SF-A17

Included parts

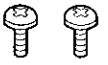


ADF tray



ADF mounting screws
(2 pcs.)

ADF securing screws
(2 pcs.)



Tray securing screws
(2 pcs.)

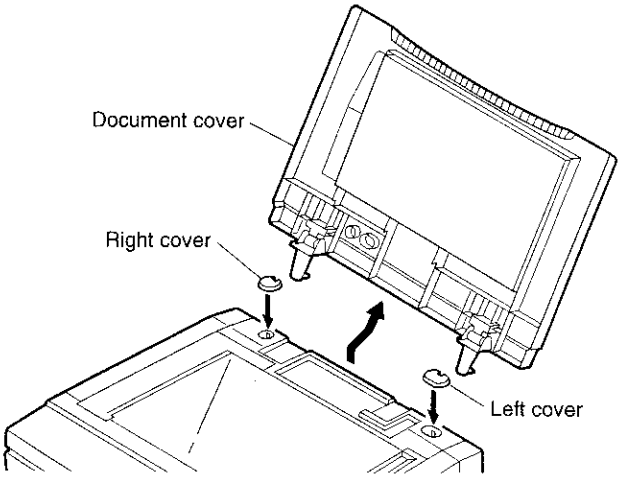
Right cover
(1 pc.)

Left cover
(1 pc.)

Unplug the copier and follow the procedure below.

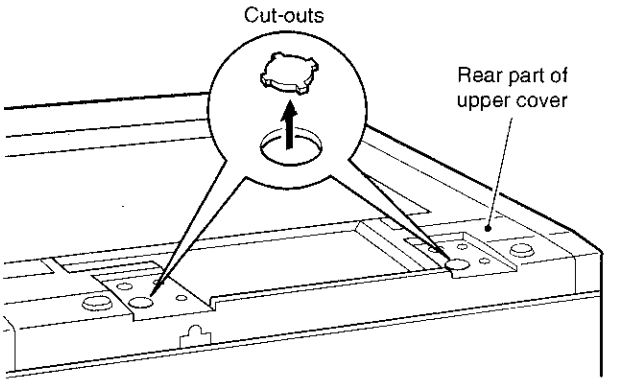
1. Remove the document cover.

Open the document cover and lift it at a slight backward angle to remove it.
Insert the left and right covers (included parts) into the holes from which the document cover has been removed.

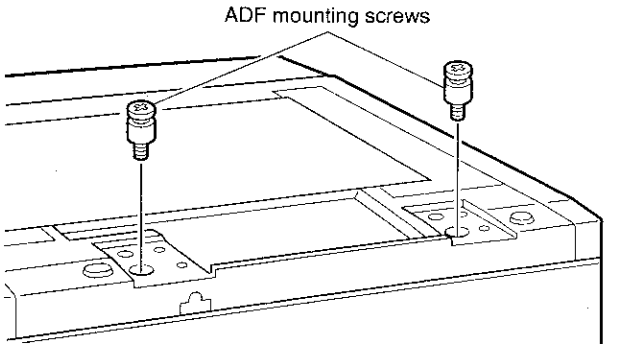


2. Mount the ADF onto the copier.

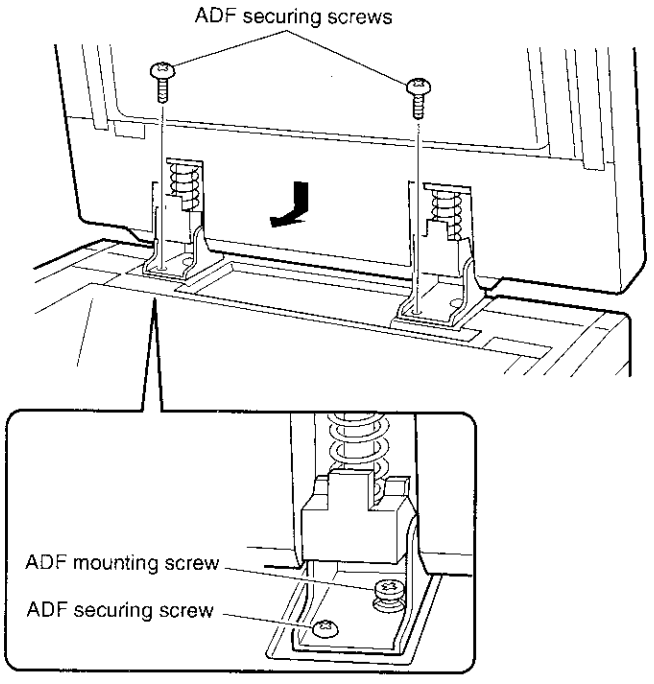
Remove the two cut-outs from the rear part of the upper cover of the copier.



Install the two ADF mounting screws.

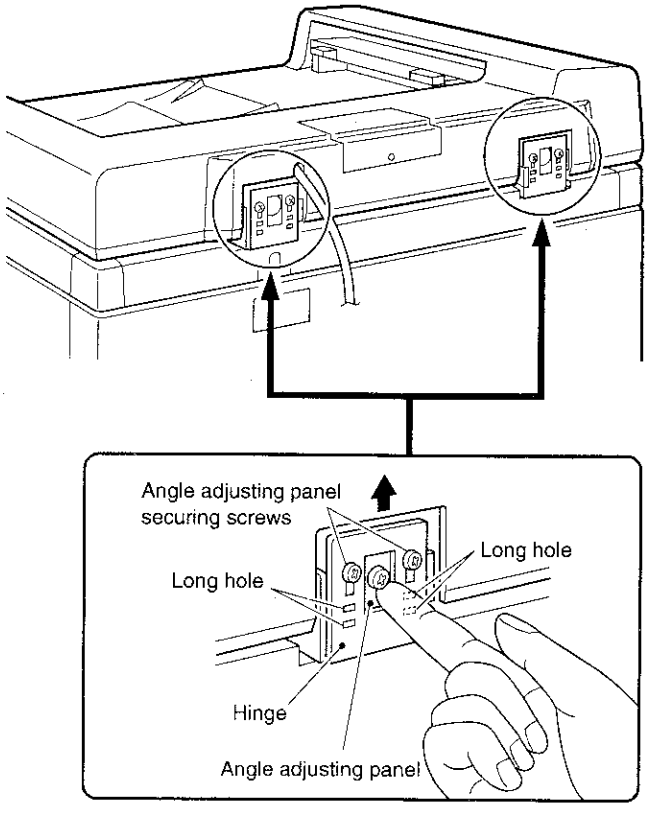


Fit the ADF mounting screws into the holes in the hinges of the ADF and secure the ADF with the two ADF securing screws.



3. Adjust the angle of ADF.

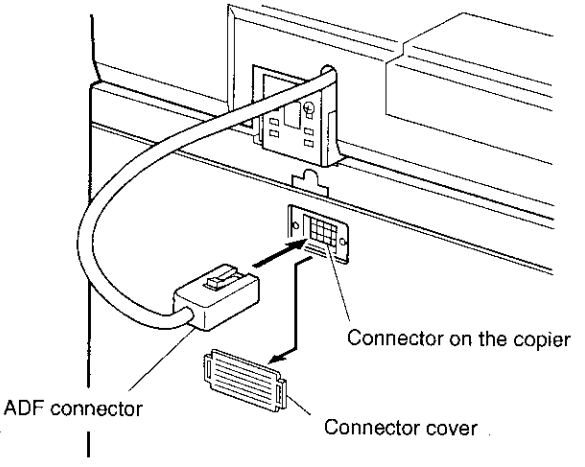
Loosen the two securing screws for the angle adjusting panel attached to the hinge angle and then fasten the loosened screws while raising the angle adjusting panel completely.



NOTE: Be sure to check that the protrusion of the angle adjusting panel is securely inserted into the long hole of the hinge.

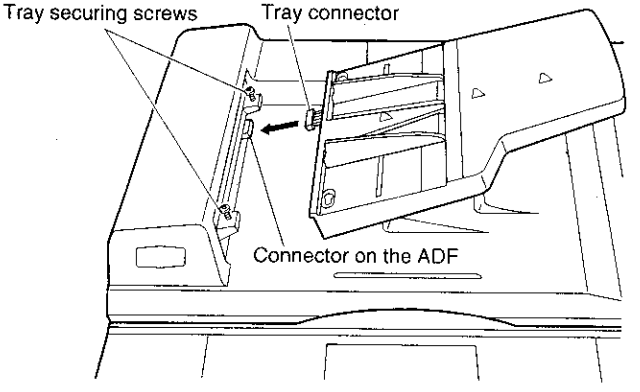
4. Connect the ADF connector.

Remove the connector cover from the copier's rear cover.
Next, connect the ADF connector to the connector on the copier.



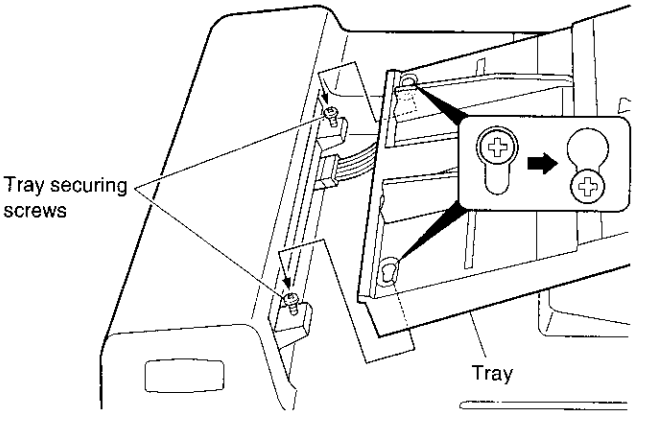
5. Connect the ADF tray connector.

Thread the M4 x 8 tray securing screws (includedparts) partway into their holes, then connect thetray connector.



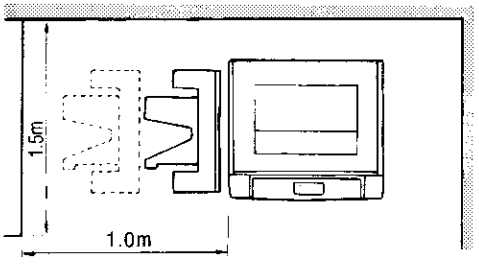
6. Attach the ADF tray.

Loosen the two ADF tray securing screws, install the tray as shown in the figure, and fasten the tray securing screws.



Before installing

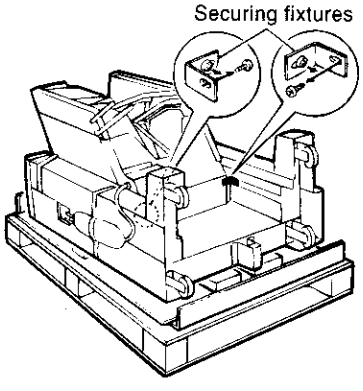
Be sure that you have plenty of room around the copier for work space.



Remove the securing fixtures and attach the caster spacers.

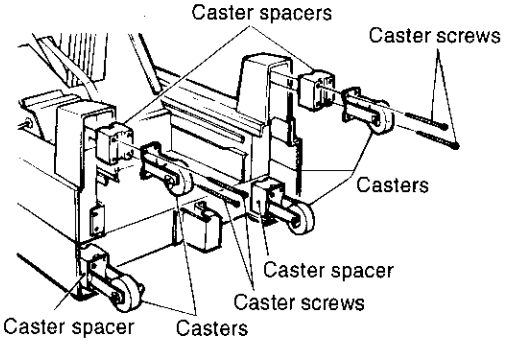
★ **When performed on the skid.**

Remove the securing fixtures (2).



Remove the caster screws (2 per caster) and take off the 4 casters.

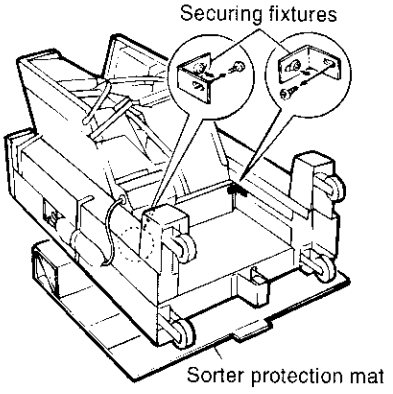
Next, attach the casters and caster spacers using 2 screws each (M4 x 50) as shown in the figure.

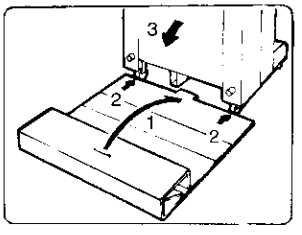


★ **When not performed on the skid**

Open the sorter protection mat, as shown in the figure, and position it against the sorter's casters. Lay the sorter down on the protection mat.

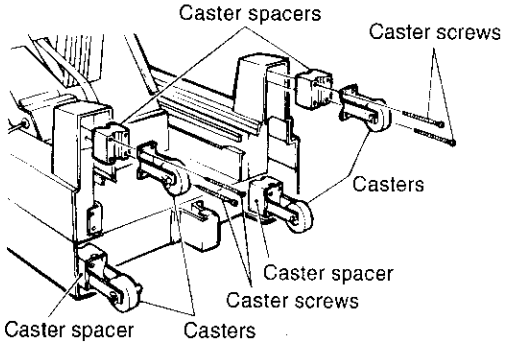
Next, remove the securing fixtures (2).



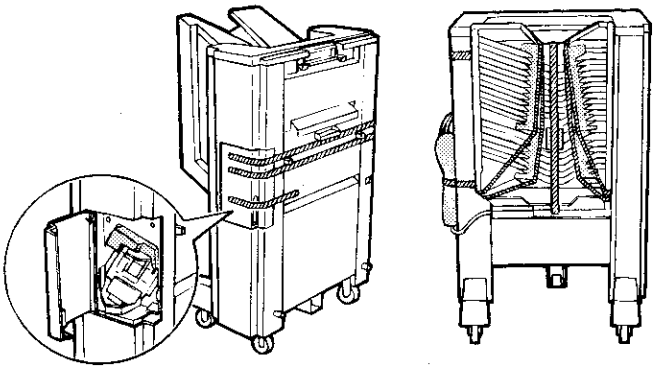


Remove the caster screws (2 per caster) and take off the 4 casters.

Next, attach the casters and caster spacers using 2 screws each (M4 x 50) as shown in the figure.



Remove all the securing tape (▨) and securing materials (□) shown in the figures below.



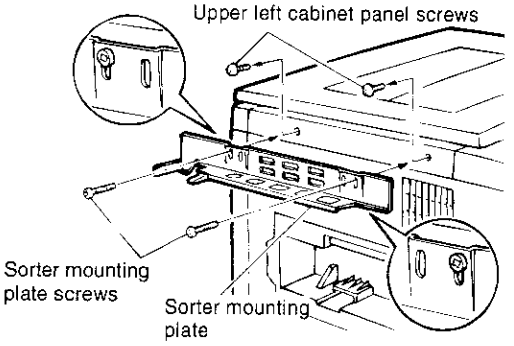
Unplug the copier's power cord before carrying out the following procedure.

A. Mounting of the staple sorter onto the copier.

1. Attach the sorter mounting plate.

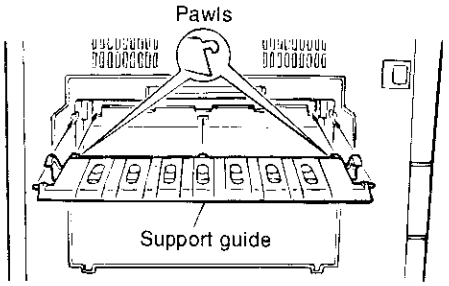
Remove the screws (2) from the copier's upper left cabinet panel. Attach the sorter mounting plate with the 2 sorter mounting plate screws (M4 x 12).

The sorter mounting plate screw holes are elongated; tighten the screws so that the sorter mounting plate hangs down in its lowest position.



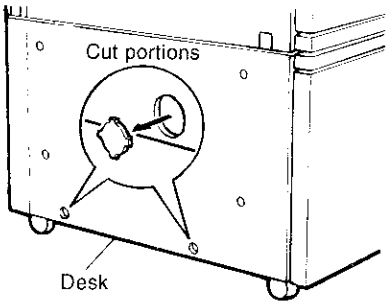
2. Attach the support guide.

Attach the support guide by attaching its pawls (2 locations) to the inside of the copier's paper output section.



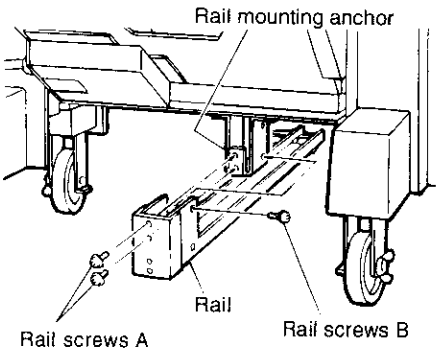
3. Cut off the cut portions of the desk's left cabinet panel.

Cut off the 2 cut portions of the desk's left cabinet panel.



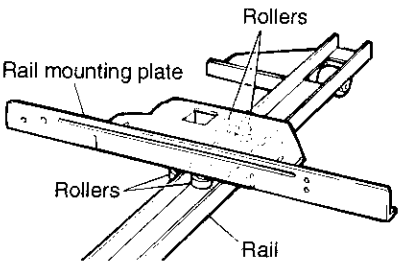
4. Attach the rail to the sorter.

Insert the rail into the rail mounting anchor, on the bottom of the sorter, and attach them with the 2 rail screws A (M4 x 6) and 1 rail screw B (M4 x 6).



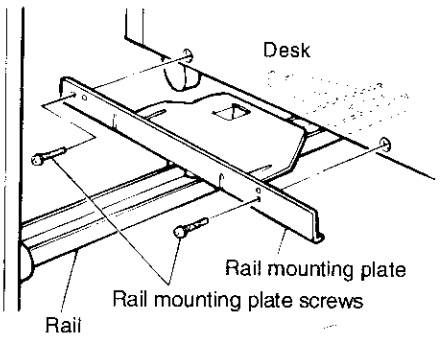
5. Fit the rail mounting plate onto the rail.

Insert the rail between the rollers on the rail mounting plate as shown in the figure.



6. Attach the rail mounting plate to the copier desk.

Slide the rail, which was just attached to the sorter, under the copier as shown in the figure. Attach the rail mounting plate to the copier with the 2 rail mounting plate screws (M4 x 14).

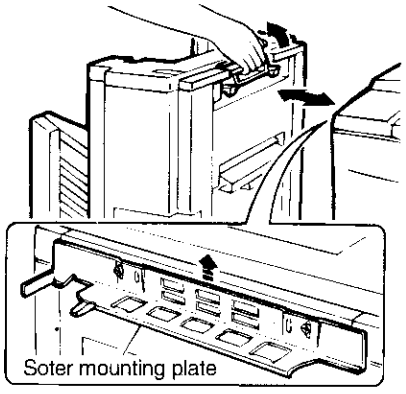


7. Confirm that the staple sorter can be attached and detached correctly.

① Latch and unlatch the staple sorter from the copier to confirm that it moves smoothly.

② Confirm that the staple sorter locks into place beside the copier.

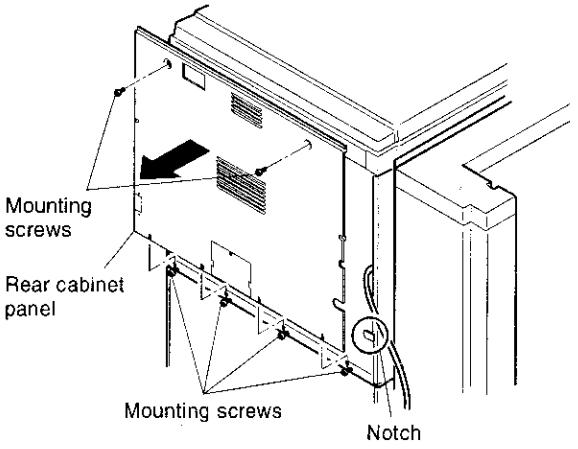
If not, adjust the height of the sorter mounting plate until the staple sorter locks securely into place.



8. Remove the copier's rear cabinet panel and cut off the cut portion of the left cabinet.

Remove the 4 screws securing the copier's rear cabinet panel and take the panel off.

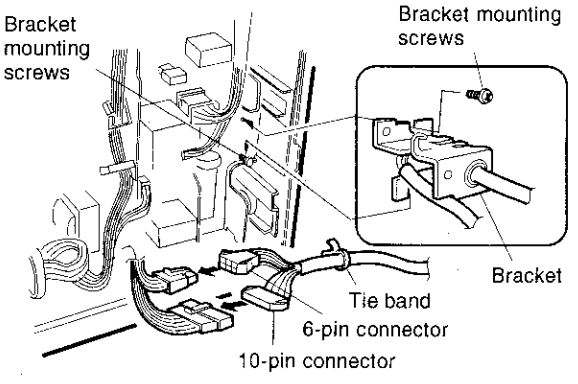
Next, cut off the cut portion (1 location) of the left cabinet panel.



9. Attach the sorter connectors.

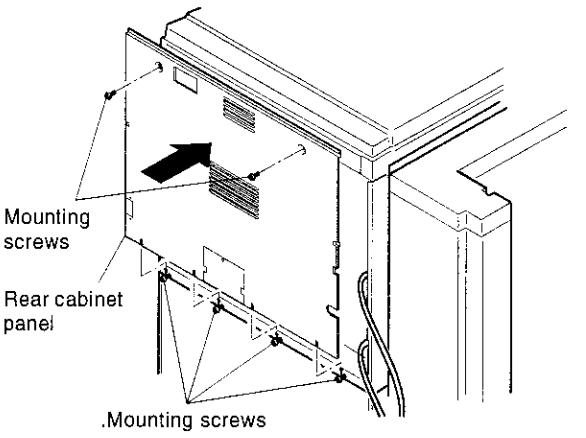
Loosely screw in 1 of the 2 supplied bracket screws as shown in the figure. Hook the bracket in place over this screw, then insert the remaining bracket screw and tighten both screws securely.

Next, connect the sorter's 6-pin and 10-pin connectors to the copier's 6-pin and 10-pin connectors. Then insert the clasp of the tie band into the hole on the bottom of the installation board.



10. Reattach the rear cabinet panel.

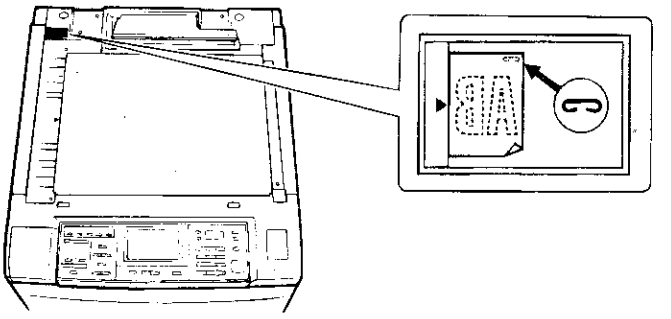
Reattach the rear cabinet panel in its original position with the 4 mounting screws.



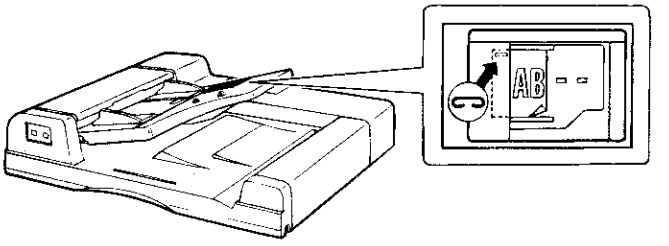
11. Affix the stapling location labels.

Affix the stapling location labels to the copier and RADF (SF-A54) as shown in the figure.

★ Copier



★ RADF (SF-A17/56)

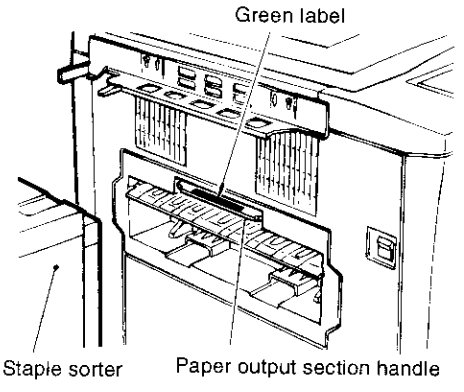


12. Affix the green label.

Lifting up on the staple sorter's release lever, separate the sorter from the copier.

Next, affix the green label to the paper output section handle as shown in the figure.

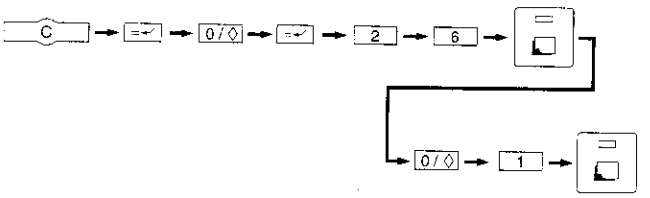
Holding the staple sorter's release lever, return the sorter to its original position. At this time, confirm that the staple sorter locks securely into place beside the copier.



Plug the copier's power cord into an electric outlet, switch on the power, and then perform the following procedure.

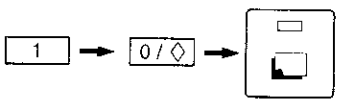
13. Set the mode.

- Perform the following key operations on the copier to set the mode.



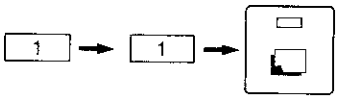
Performing the above operation will cause the current setting to be displayed.

- If only the SF-S53 is being set, continue by performing the following key operation to complete the mode setting.



- If the mode is being set for a combination of options, add up the numerical values of the options to be set (see the table below) and input the total sum.

Example: When setting SF-S53 and SF-A17/56, the total sum of their values is 11 (1 + 10). Therefore, perform the following key operations.



SF-A17/56	1

SF-D20	4
SF-D21H	4

Sorter	10

B. Staple sorter operation check

1. Check the sort mode.

Make 20 copies in the sort mode and confirm that the copies are distributed to the sort bins with no abnormal noises from the sorter.

2. Check the non-sort mode.

Make copies in the non-sort mode and confirm that they are sent to the non-sort bin.

3. Use the ADF (automatic document feeder) and check the staple sort mode.

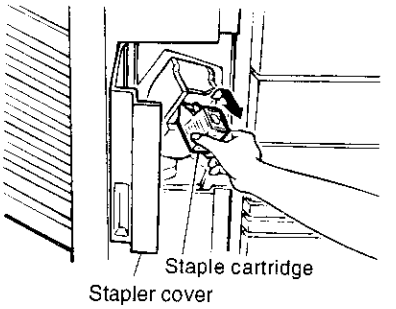
Place 2 or more sheets in the ADF and make copies in the staple sort mode. Confirm that the copies are distributed to the sort bins, that the staple guide bar arranges the copies and that the stapler functions properly.

If at this time the copies have not been stapled or the stapler is jammed, adjust the staples by performing one of the following procedures.

If copies have not been stapled

1. Remove the staple cartridge.

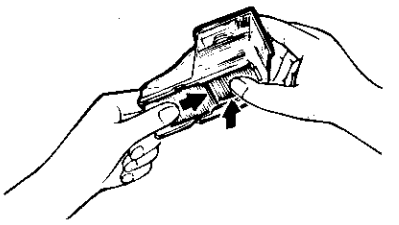
Open the stapler cover, lift up on the staple cartridge and remove it by pulling in the direction of the arrow.



2. Check the staple cartridge.

Confirm that the sheets of staples in the cartridge are properly stacked.

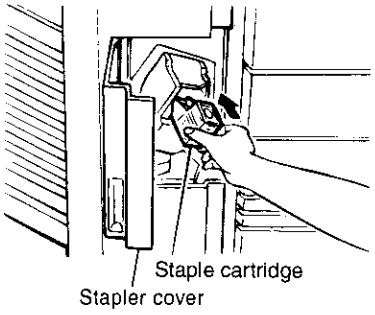
If not, slide the staples back in the direction of the arrow while pressing in gently on the bottom of the cartridge.



3. Reinsert the staple cartridge.

Push the staple cartridge in horizontally until it clicks securely into place.

Then close the stapler cover.

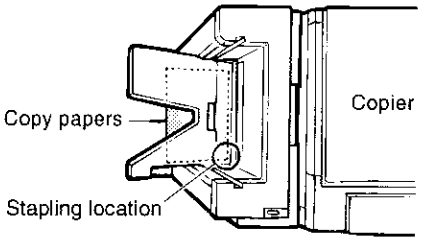


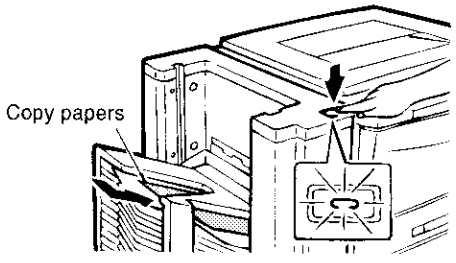
4. Confirm that papers are stapled correctly.

Place a set of papers in the 2nd bin (below the non-sort bin), check the stapling location, and then press the manual staple key when it lights up.

Next, remove the papers that were placed in the 2nd bin and confirm that they have been stapled correctly.

At this time, if the papers still have not been stapled, repeat this procedure once again.





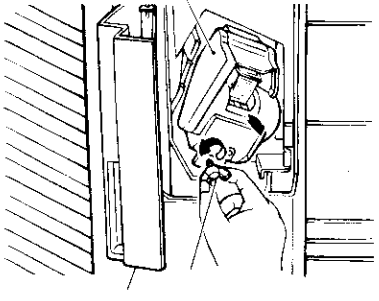
This completes the staple sorter installation.

If staples have become jammed.

1. Remove the stapler unit.

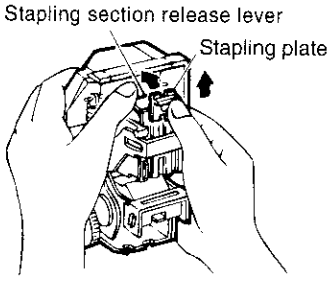
Open the stapler cover and remove the mounting screw securing the unit in place.

Next, remove the staple unit.



2. Open the stapling section.

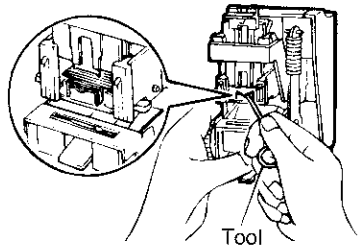
Open the stapling section by pushing up on the stapling plate while pressing on the stapling section release lever.



3. Remove the jammed staples.

Remove the jammed staples with the supplied tool as shown in the figure.

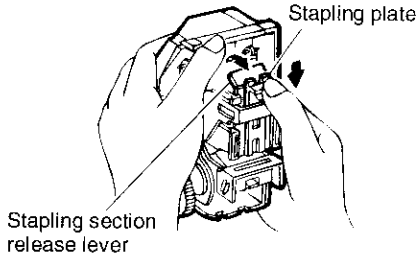
* This tool can be found on the inside of the staple unit cover.



4. Close the stapling section.

Press down on the stapling plate and return it to its original position.

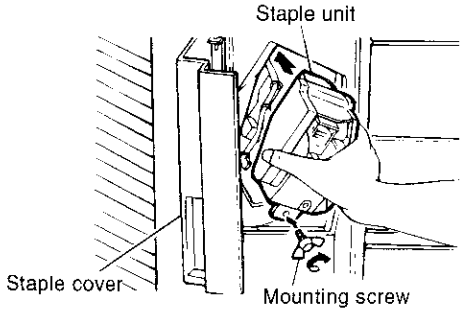
Next, return the stapling section release lever to its original position.



5. Reinstall the staple unit.

Reinstall the staple unit in its original location using the mounting screw to secure it in place.

Then close the stapler cover.

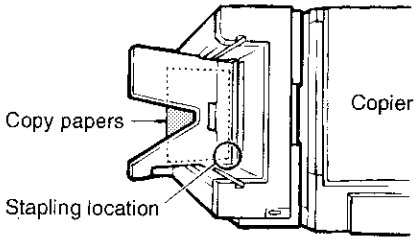


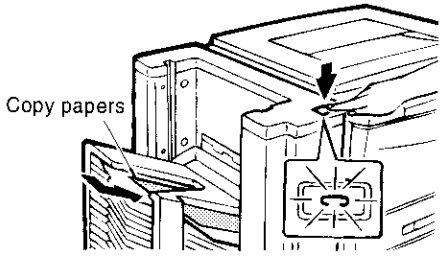
6. Confirm that papers are stapled correctly.

Place a set of papers in the 2nd bin (below the non-sort bin), check the stapling location, and then press the manual staple key when it lights up.

Next, remove the papers that were placed in the 2nd bin and confirm that they have been stapled correctly.

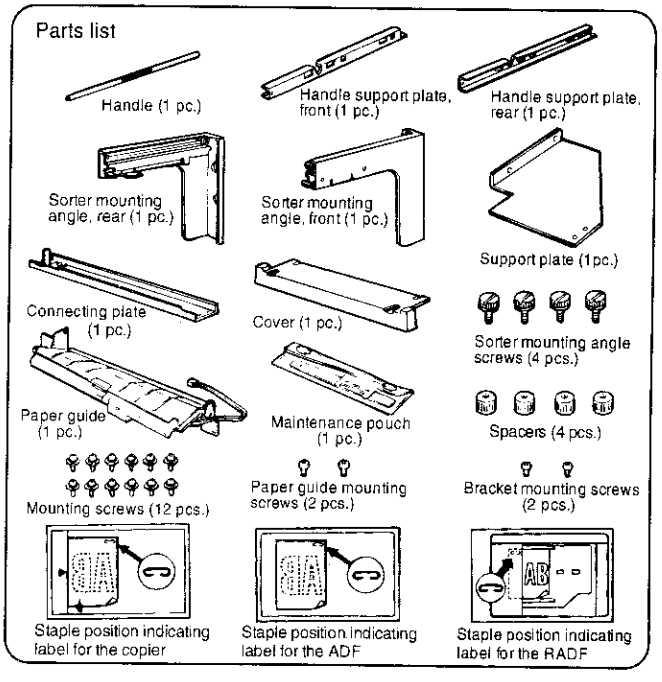
At this time, if the papers still have not been stapled, repeat this procedure once again.



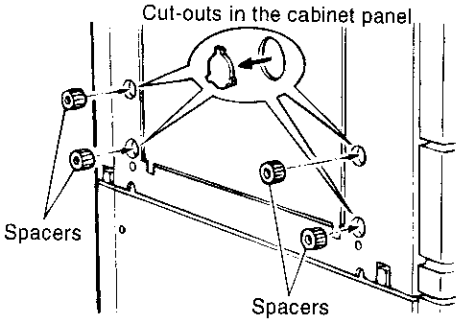


This completes the staple sorter installation.

(4) SF-S52


Parts list
Handle (1 pc.)
Handle support plate, front (1 pc.)
Handle support plate, rear (1 pc.)
Sorter mounting angle, rear (1 pc.)
Sorter mounting angle, front (1 pc.)
Support plate (1 pc.)
Connecting plate (1 pc.)
Cover (1 pc.)
Sorter mounting angle screws (4 pcs.)
Paper guide (1 pc.)
Maintenance pouch (1 pc.)
Spacers (4 pcs.)
Mounting screws (12 pcs.)
Paper guide mounting screws (2 pcs.)
Bracket mounting screws (2 pcs.)
Staple position indicating label for the copier
Staple position indicating label for the ADF
Staple position indicating label for the RADF

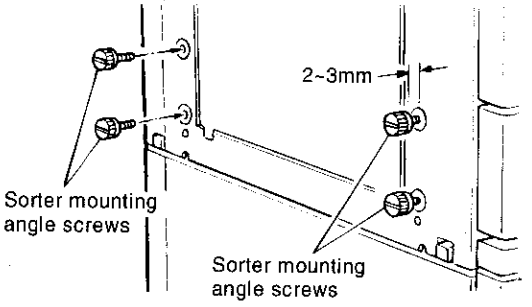
a. After unpacking, check that all the parts are provided as follows:



b. Disconnect the power plug of the copier body.

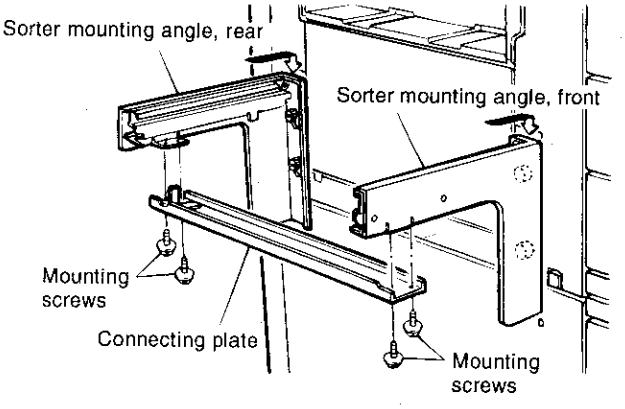
c. Remove the cut-outs in the cabinet panel at the spacer holes on the left side of the copier and fit the sorter mounting angle spacers into the holes.

d. Attach the sorter mounting angle screws (4 pcs). Allow a space of 2 - 3 mm between the screws and the spacers.

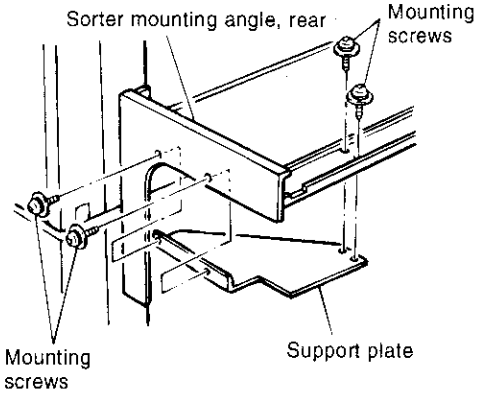


e. Attach the sorter mounting angle and the connecting plate.

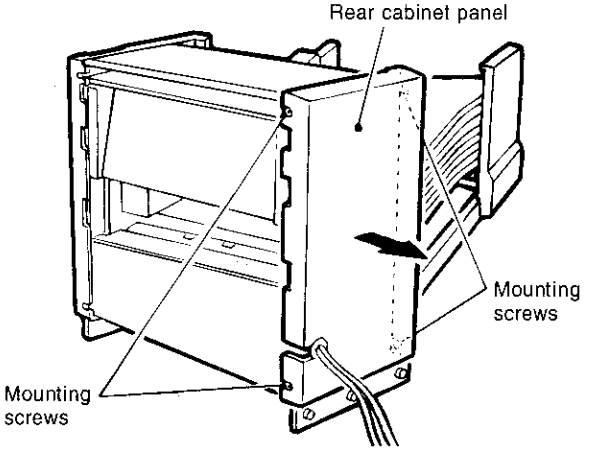
- Hook the front and rear sorter mounting angles into the spaces between the sorter mounting angle screws and the spacers, and tighten the four sorter mounting angle screws.
- Next, use the four connecting plate mounting screws to secure the connecting plate to the front and rear sorter mounting angles.



- Attach the support plate to the sorter mounting angle R and the connecting plate, and fix it with four fixing screws.



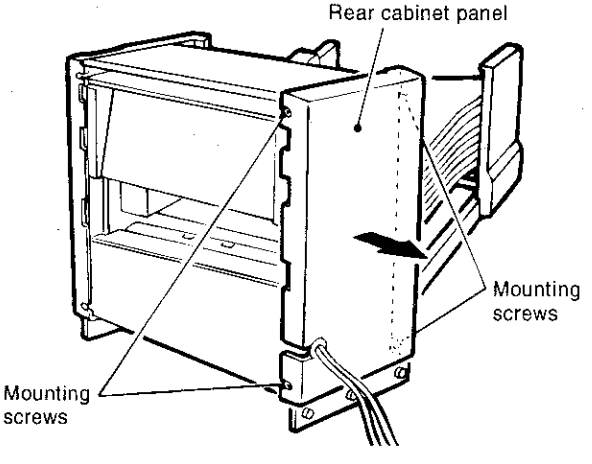
f. Remove the rear cabinet panel from the sorter.
Loosen the 4 screws securing the rear cabinet panel to the sorter, then remove the rear cabinet panel.



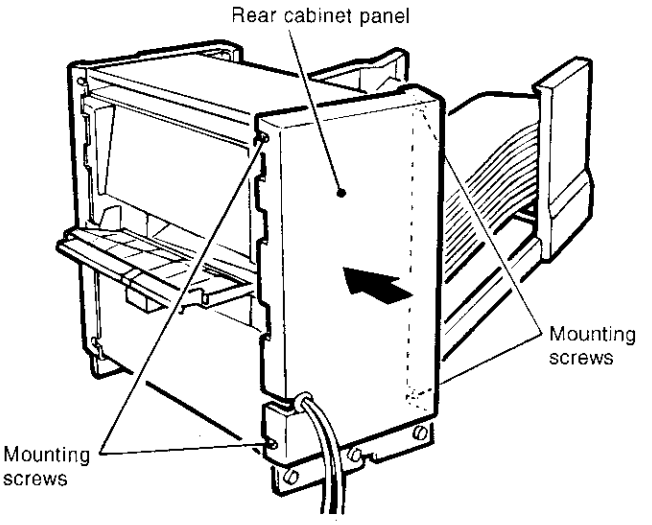
g. Mount the paper guide.

① Insert the paper guide harness through the hole, and use the 2 mounting screws to attach the paper guide.

② Connect the 3-pin connector of the paper guide harness to the 3-pin connector of the sorter control base.

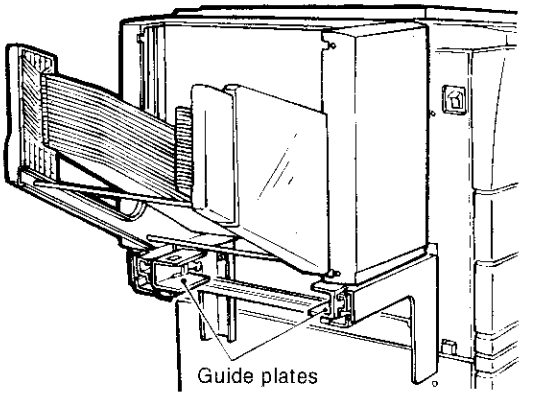


h. Install the rear cabinet panel to the sorter.
Tighten the 4 mounting screws to install the rear cabinet panel.

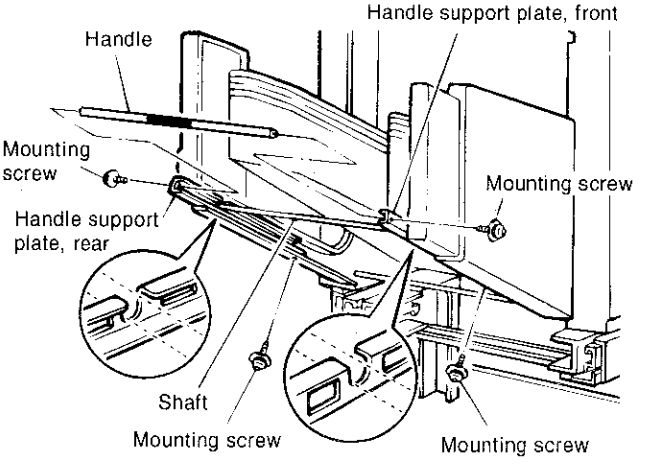


i. Mount the sorter onto the copier.

- Fit the guide plate on the sorter body into the guides on the front and rear sorter mounting angles.



j. Attach the handle to the sorter.
Attach the handle mounting plates F and R to the sorter shaft as shown in the figure, and fix it with two fixing screws.
Then attach the handle to the handle mounting plates F and R and fix it with two fixing screws.

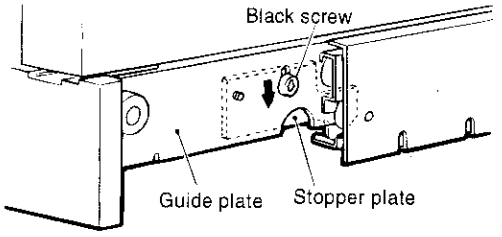


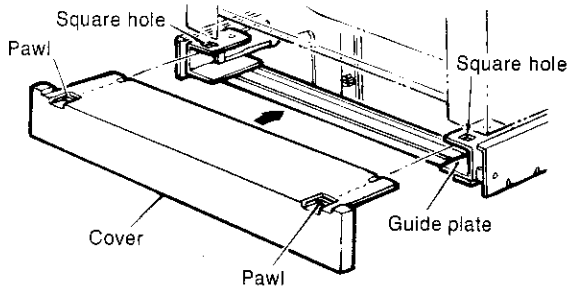
k. Lock the sorter body.

① Pull out the sorter body slowly until the black screw on the guide plate can be seen.

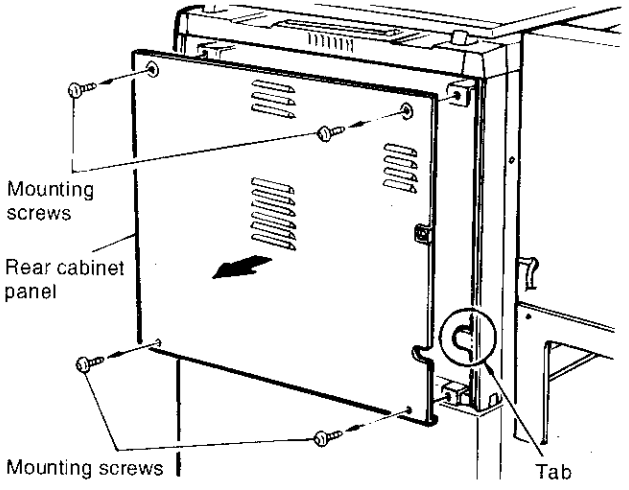
② Loosen the black screws (one in the front, one in the rear) fixing the stopper plates (one in the front, one in the rear), and lower the stopper plates all the way, then tighten the black screws.

③ Insert the pawls in the cover into the square holes in the guide plates, and attach the cover.





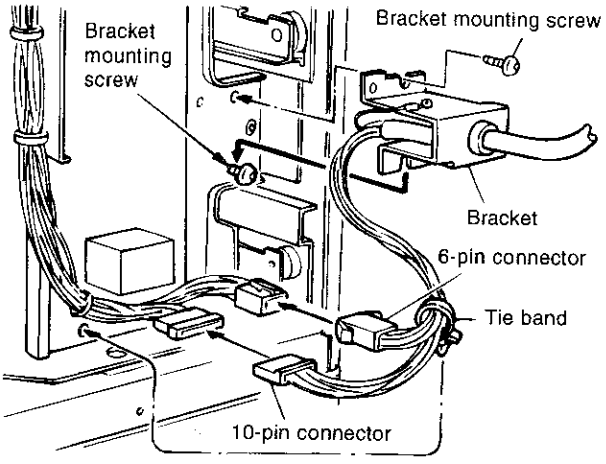
l. Remove the rear cabinet panel from the copier and cut out the notch in the cabinet panel.



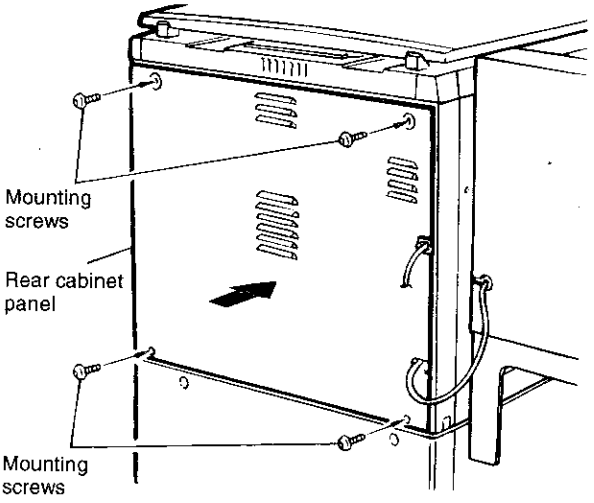
m. Connect the sorter connector.

① Use the two bracket mounting screws to secure the bracket.

② Connect the 6-pin connector and the 10-pin connector of the sorter to the 6-pin connector and the 10-pin connector of the copier.

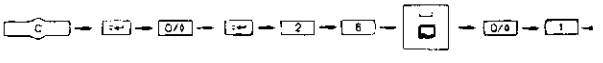


n. Attach the rear cabinet panel with four screws.

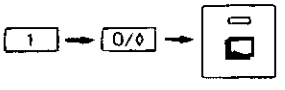


o. Set the mode.

① The following key operation will display the current set value.

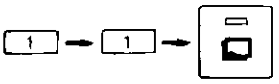


② If only the SF-S52 is to be set, immediately after the above key operation, operate the keys as follows:



③ If the mode is to be set for a combination with other options, add up the total of the setting values for all the peripheral devices to be set from the table shown below, and set the total value.

<Example> If the SF-S52 and the SF-A17/A56 are to be set, the total setting value is 10 + 1 = 11. Operate the keys as follows:



Set values of peripheral devices

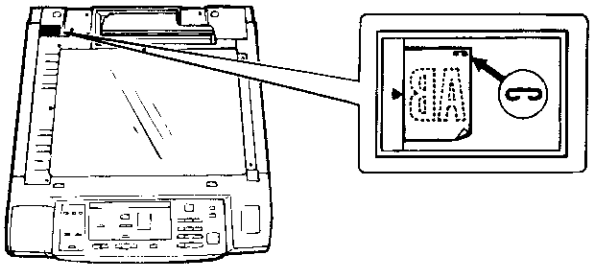
SF-A17/A56	1

SF-D20	4
SD-D21	4

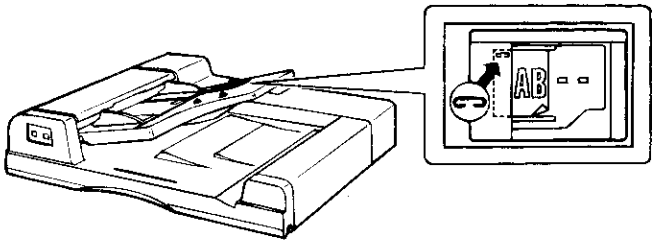
Sorter	10

p. Affix the staple position indicating label to the copier and the ADF (SF-A17) or the RADF (SF-A56) as shown in the figure.

- Copier

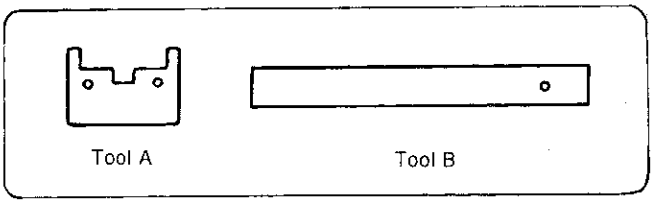


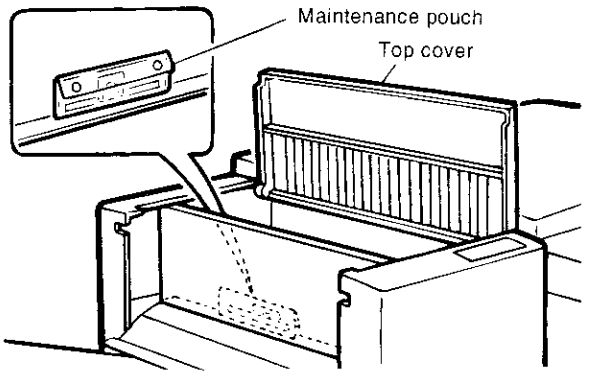
- ADF (SF-A17)
- RADF (SF-A56)



q. Attach the maintenance pouch.

- Open the sorter top cover and attach the enclosed maintenance pouch containing tool A and tool B onto the frame of the staple sorter.





Check the staple sorter.

a. SORT mode
Make 20 copies in the SORT mode. Make sure all copies are properly sorted to the sort bins and also check for any unusual operating noises.

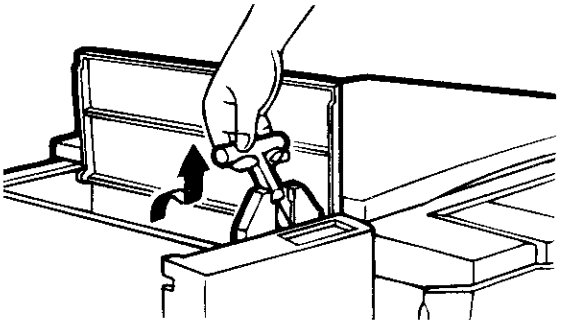
b. NON-SORT mode
Make copies in the NON-SORT mode. Make sure that all copies go to the top bin.

c. STAPLE SORT mode
Set more than 2 originals in the ADF and make copies in the STAPLE SORT mode. Make sure all copy papers are properly sorted to the bins and are properly stapled.

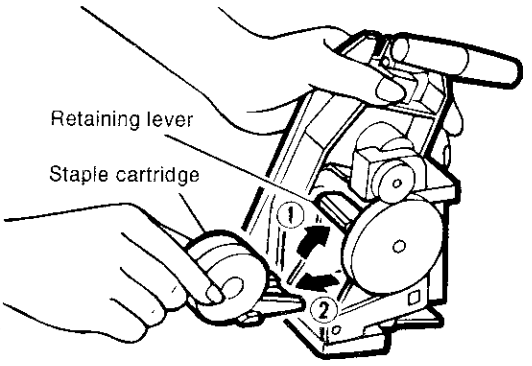
Note: When copies are not stapled or when a staple jam occurs, refer to "d. When copies are not stapled" or "e. When a staple jam occurs."

d. When copies are not stapled:

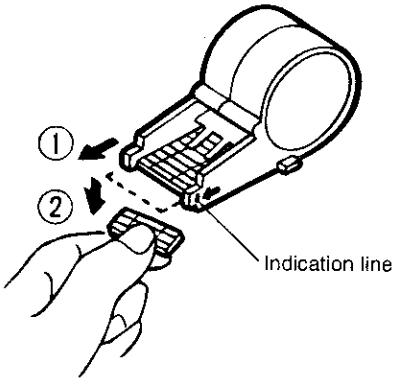
① Open the sorter top cover, raise the stapler handle up and pull out the stapler.



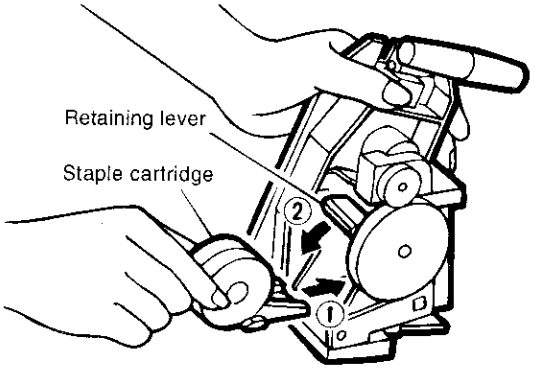
② Raise the retaining lever and remove the staple cartridge from the stapler.



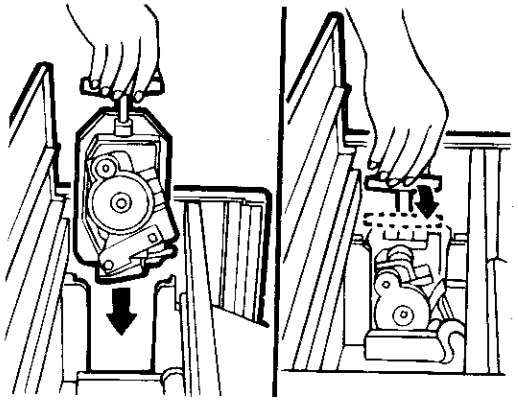
③ Check that the first staple in the staple cartridge is at the indication line. If not, pull it to the indication line. If any staples are protruding past the indication line, tear them off at the indication line.



④ Install the staple cartridge in place. Lower the retaining lever to secure the staple cartridge.

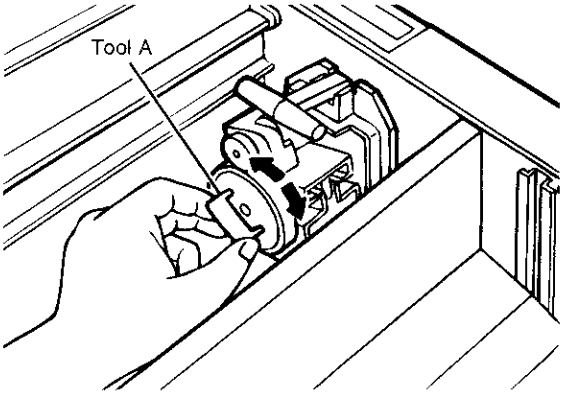


⑤ Align the stapler with the groove and position it in place.
Lower the stapler handle back down as shown.
Close the sorter top cover.



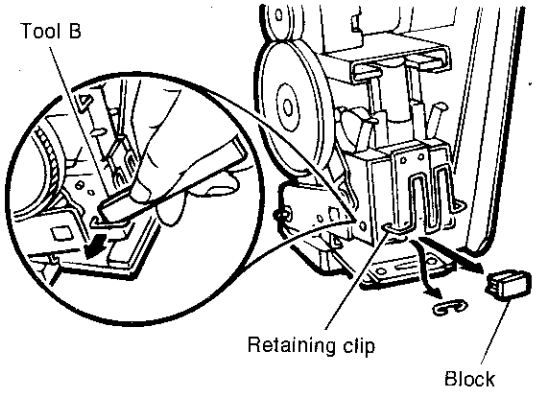
e. When a staple jam occurs:

① Open the top cover, raise the stapler handle up and pull out the stapler.
If the stapler is difficult to remove because of misfed paper, insert tool A in the maintenance pouch into the wheel of the stapler, then turn in either direction to ease stapler removal.



② Raise the retaining lever and remove the staple cartridge from the stapler.

③ Using tool B in the maintenance pouch, remove the retaining clip at the stapling position, remove the block at the tip, then remove the jammed staple.



④ Replace the block and the retaining clip to their original positions.

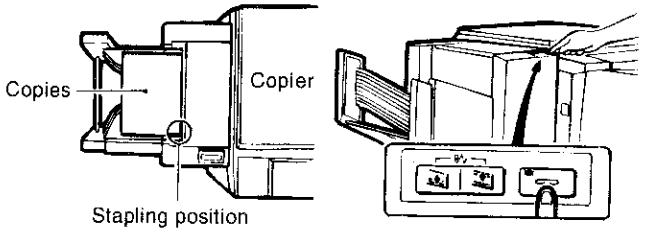
⑤ Place the staple cartridge back into position.
Lower the retaining lever to secure the staple cartridge.

⑥ Align the stapler with the groove and position it in place.
Lower the stapler handle back down as shown.
Close the top cover.

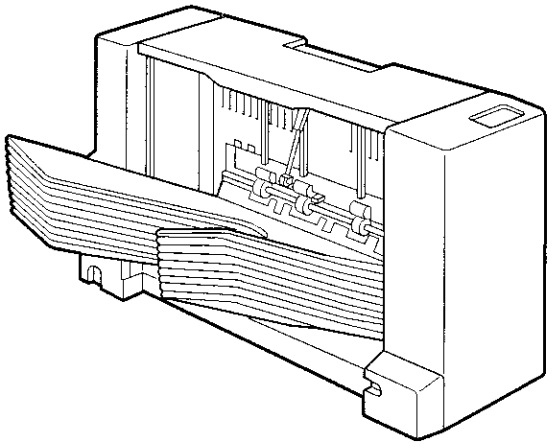
f. Make sure the copies are stapled.

① Place a set of copies on the top bin and make sure of the correct staple position. Press the manual staple key.

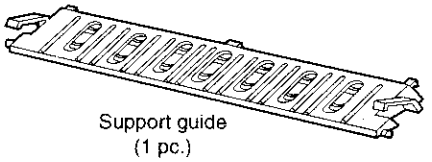
② Remove the copies from the top bin and check to be sure the stapler works properly.
Note: If they are not stapled, repeat this procedure.



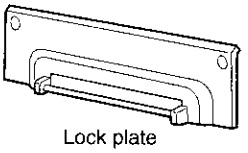
(5) SF-S18



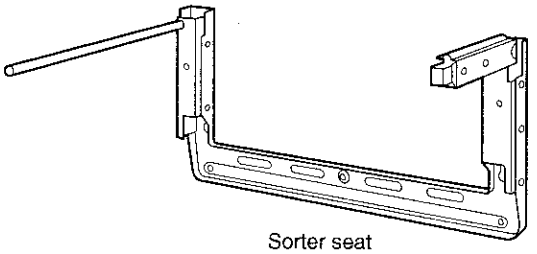
Included parts



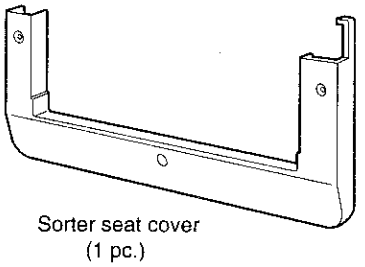
Support guide
(1 pc.)



Lock plate
(1 pc.)



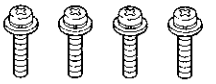
Sorter seat
(1 pc.)



Sorter seat cover
(1 pc.)

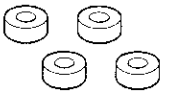
Sorter seat cover securing screws
(3 pcs.)

Lockplate screws (M4 x 8)
(2 pcs.)



Sorter seat securing screws
(4 pcs.)

Sorter securing screws (M4 x 8)
(2 pcs.)



Spacers
(4 pcs.)

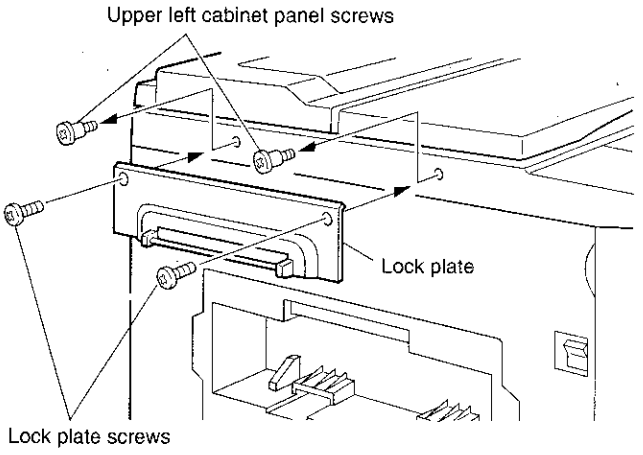
Stopper screw
(1 pc.)

Felt washer
(1 pc.)

Unplug the copier and follow the procedure below.

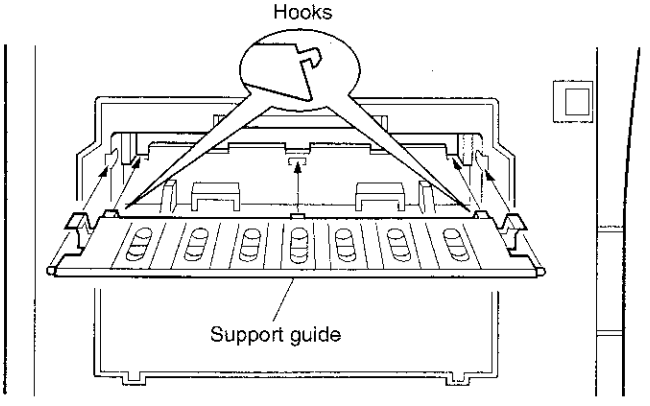
1. Mount the lock plate.

Remove the screws (2) from the upper side of the copier's left cabinet panel.
Mount the lock plate to the upper side of the copier's left cabinet panel and secure it with the M4 x 8 lockplate screws (2).



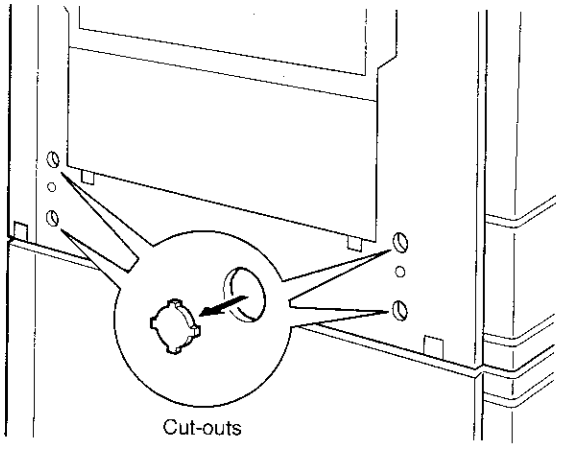
2. Mount the support guide.

Hang the two hooks of the support guide on the exit area of the copier to mount the support guide.



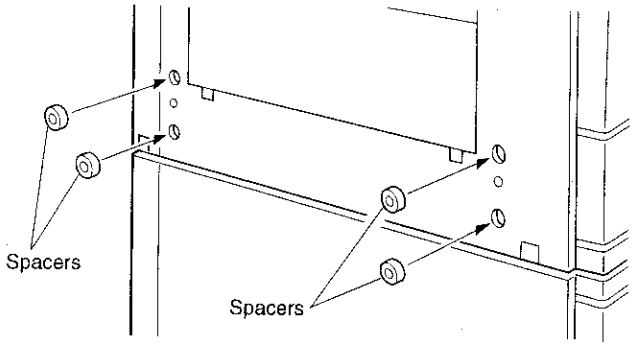
3. Remove the cut-outs.

Remove the four cut-outs from the left cabinet panel of the copier.



4. Insert the spacers.

Insert the four spacers into the holes which have been made by removing the cut-outs in step 3.

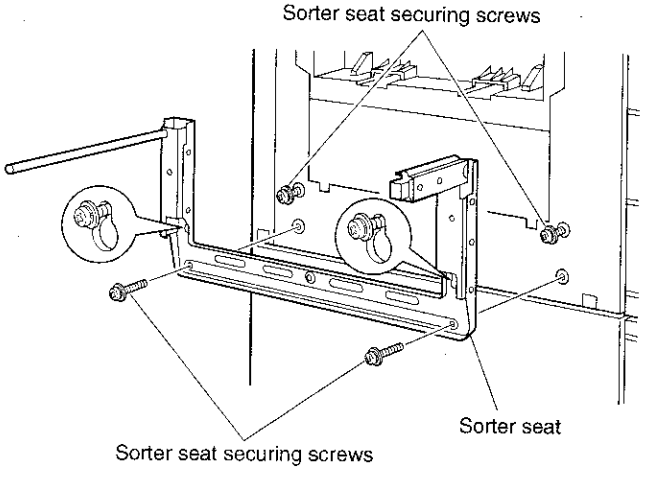


5. Mount the sorter seat.

Temporarily secure the sorter seat securing screws to the two upper spacers which have been mounted in step 4.

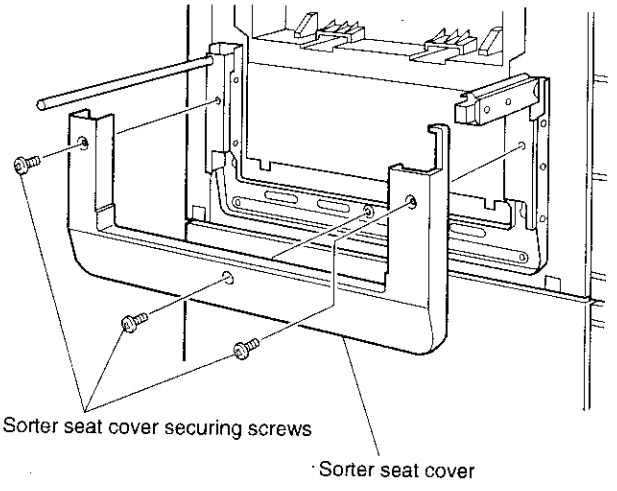
Insert these two sorter seat securing screws into the two upper holes of the sorter seat as shown in the figure.

Secure the lower part of the sorter seat by inserting the two sorter seat securing screws into the lower two holes of the sorter seat and tighten the temporarily secured upper screws to secure the sorter seat.



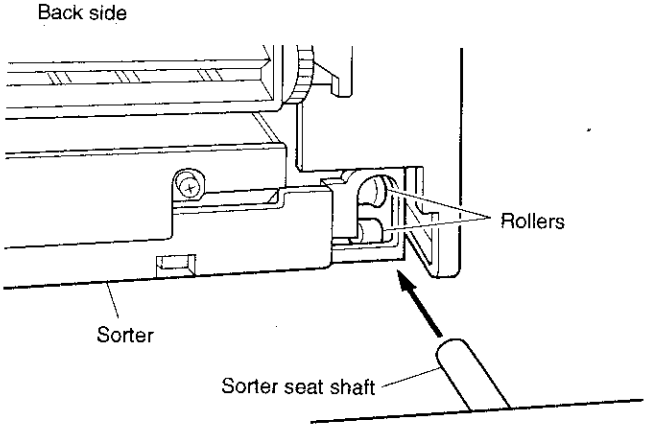
6. Mount the sorter seat cover.

Mount the sorter seat cover to the sorter seat and secure it using three sorter seat cover securing screws.

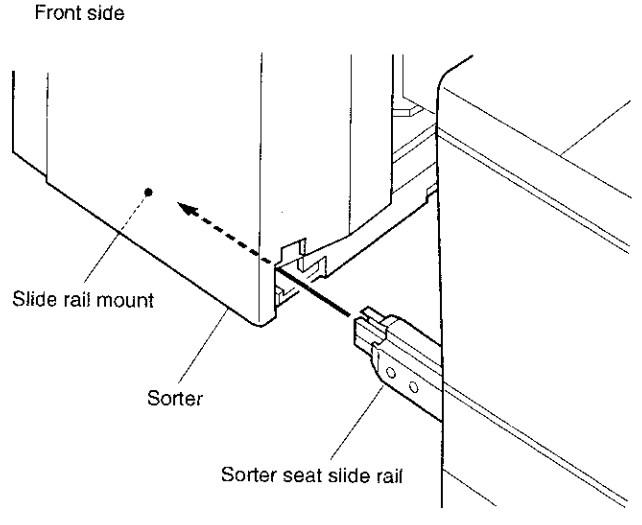


7. Mount the sorter.

Insert the shaft on the back of the sorter seat between the rollers at the back of the sorter.



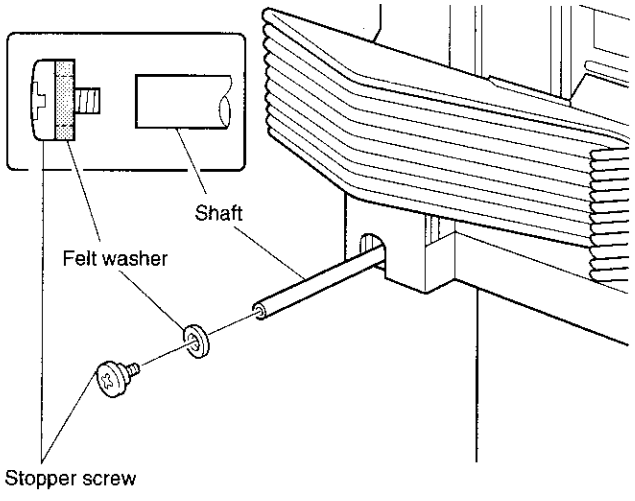
Next, insert the slide rail on the front of the sorter seat into the slide rail mount on the front of the sorter and push the sorter in place.



NOTE: Be sure to slide the sorter away from the copier and check that the sorter is not removed from the slide rail of the sorter seat.

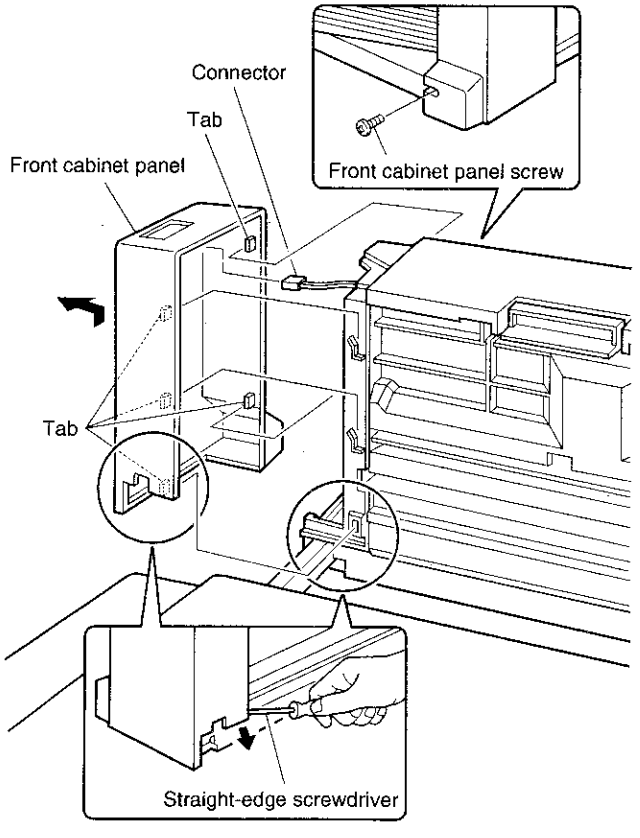
8. Mount the stopper.

Mount the felt washer to the stopper screw and secure the screw to the sorter seat shaft.



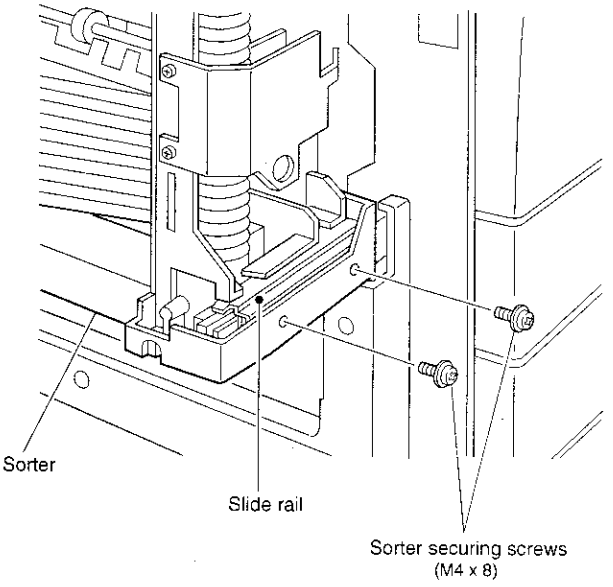
9. Remove the sorter's front cabinet panel.

Remove the front cabinet panel screw.
Next, using a screwdriver, pry open the lower part of the front cabinet panel to pull the lowest tab from the slot in which it is anchored.
Pull the front cabinet panel slightly up and out to remove it.
Disconnect the connector which is plugged into the front cabinet panel.



10. Attach the sorter to the sorter seat.

Install the M4 x 8 sorter securing screws (2 pcs.) in the screw holes on the sorter to attach the sorter to the sorter seat.



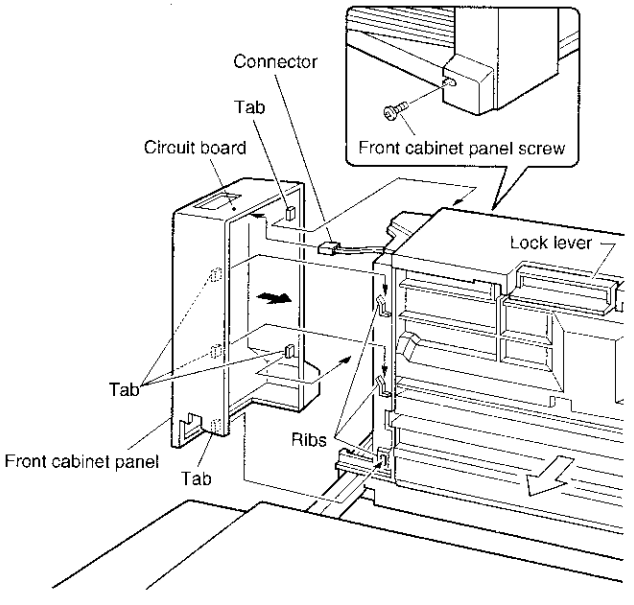
11. Mount the sorter's front cabinet panel.

Plug the connector from the sorter into the circuit board inside the sorter's front cabinet panel.

Fit the tabs on the left side of the front cabinet panel behind the ribs on the sorter, and slide the tabs on the right-hand side of the front cabinet panel behind the ribs in the sorter.

Check to be sure the tabs are securely positioned behind the ribs and inserted properly into the slot.

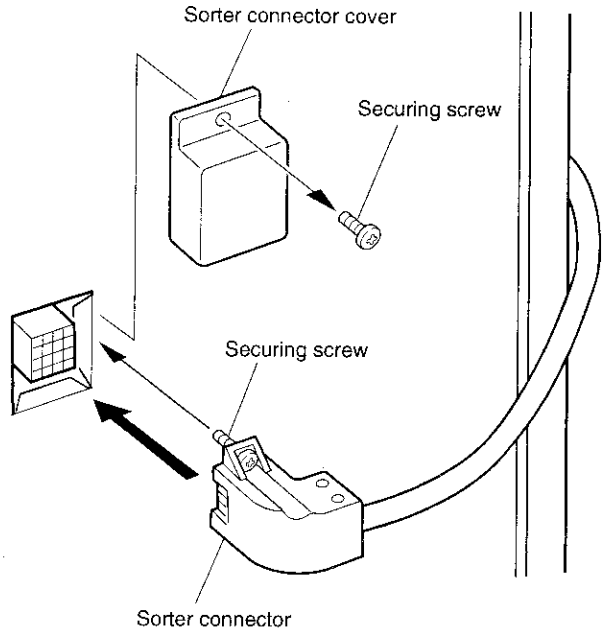
Secure the front cabinet panel using the screw which was removed in step 9.



12. Connect the sorter connector.

Remove the sorter connector cover securing screw which is mounted to the rear cabinet panel of the copier and remove the sorter connector cover.

Connect the sorter connector to the connector on the copier and secure it using the sorter connector securing screw.

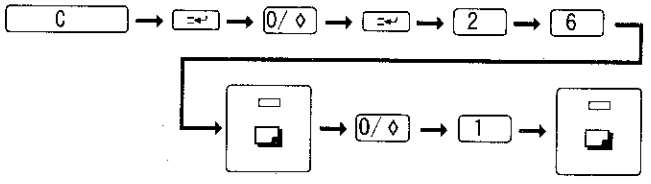


Plug the copier into a grounded outlet and turn the power switch on.

Then, follow the procedure below.

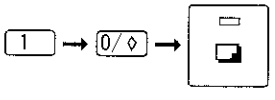
13. Set the mode.

- Operate the copier keys to set the mode.



The above key operation will display the currently set mode.

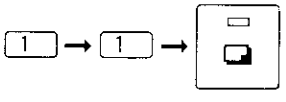
- When only the SF-S18 is to be set, immediately after the above key operation, operate the keys as follows:



- If the mode is to be set in combination with other options, use the table shown below to add up the total of the setting values for all the peripheral devices to be set, and set that total value.

For example, if the SF-S18 and RADF are to be set, the total setting value is 1 + 10 = 11.

Operate the keys as follows:

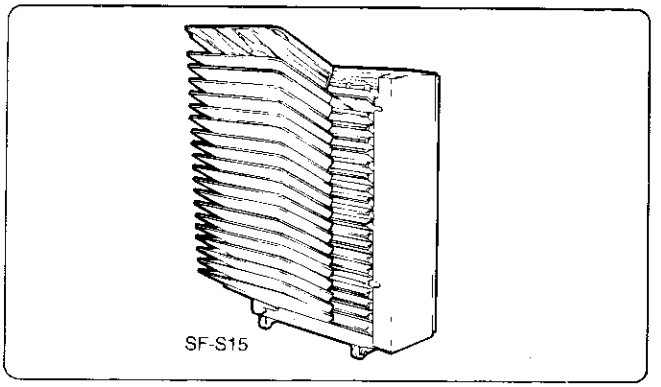


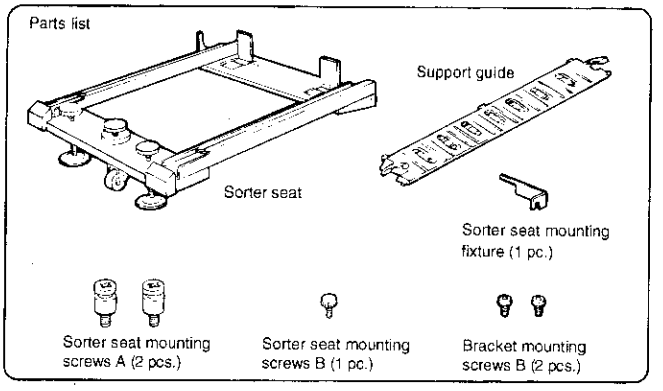
RADF	1
ADF	1

Stand/paper drawer	4

SF-S18	10

(6) SF-S15 (20-Bin Sorter)

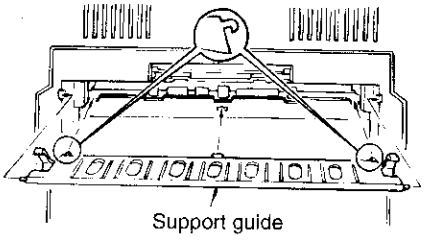



Parts list
Support guide
Sorter seat
Sorter seat mounting fixture (1 pc.)
Sorter seat mounting screws A (2 pcs.)
Sorter seat mounting screws B (1 pc.)
Bracket mounting screws B (2 pcs.)

Unplug the copier and follow the procedure below.

1. Install the support guide.

Hook the pawls (two locations) of the support guide to the inside of the copier paper exit end to install the guide as shown in Fig.

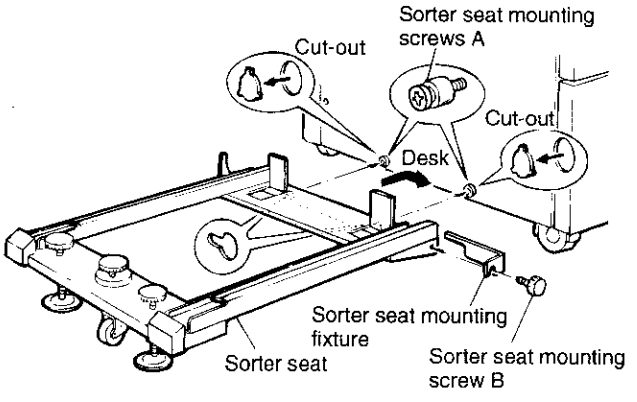


2. Mount the sorter seat to the desk.

Remove the two cut-outs in the cabinet panel on the left side of the desk.

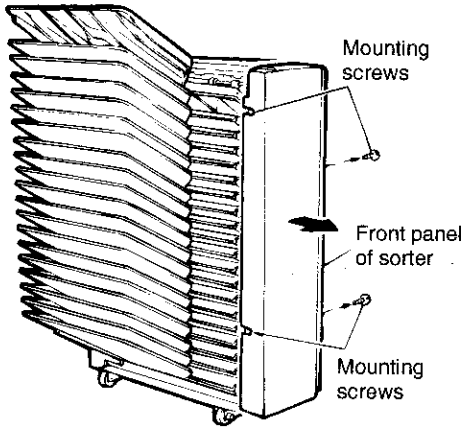
Secure the two sorter seat mounting screws A to the desk.

Next, hook the sorter seat onto the two sorter seat mounting screws A which were secured to the desk, and then use the one sorter seat mounting screw B to secure the sorter seat mounting fixiture as shown.



3. Remove the front panel of the sorter.

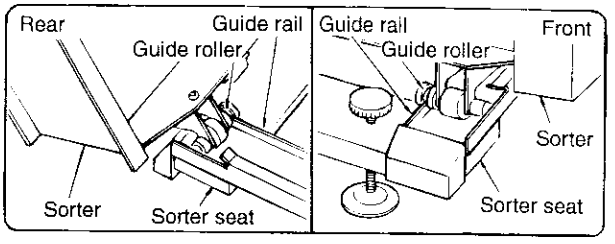
Loosen the four mounting screws in the front panel of the sorter and remove the panel.

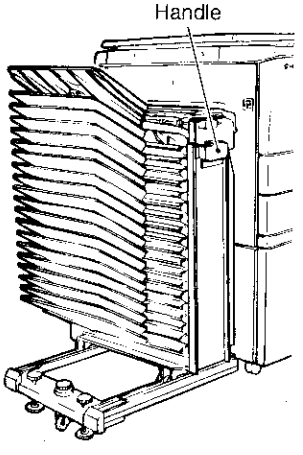


4. Place the sorter on the sorter seat.

While holding the handle, place the sorter on the sorter seat's guide rails and push it gently as far back as it will go.

When doing this, confirm that the rollers at the front of the sorter are correctly seated on the sorter seat.

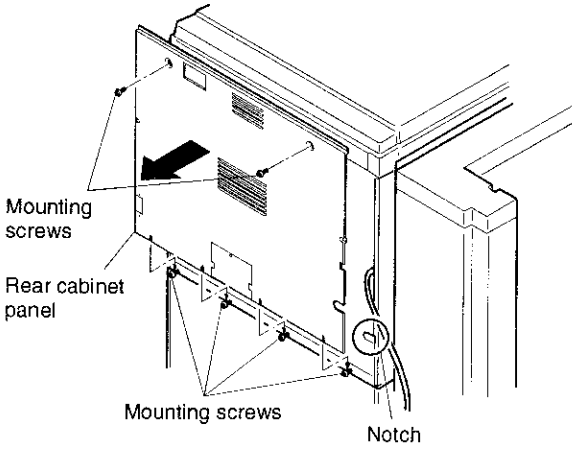




5. Remove the rear cabinet panel from the copier and cut out the notch in the cabinet panel.

Remove the four screws which secure the rear cabinet panel of the copier to remove the rear cabinet panel.

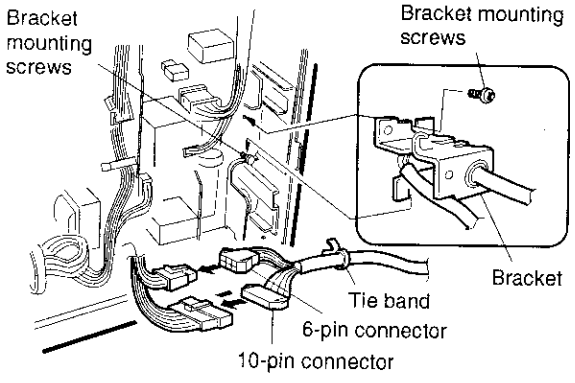
Cut out the notch (one location) in the cabinet panel.



6. Connect the sorter connectors.

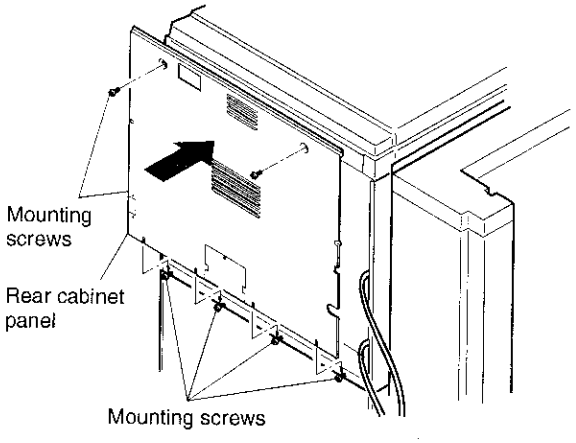
Use the two bracket mounting screws to secure the bracket attached to the sorter harness to the frame of the copier.

Connect the 6-pin and 10-pin sorter connectors to the 6-pin and 10-pin connectors of the copier and insert the tie band into the hole under the board installation part.



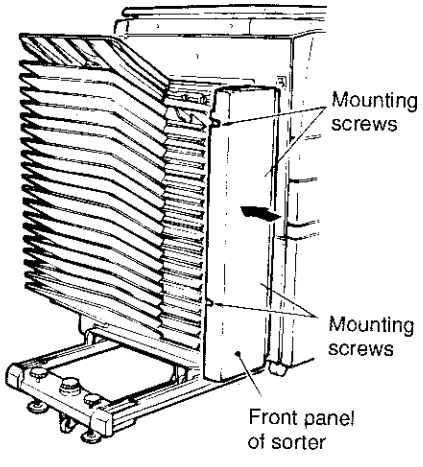
7. Reattach the rear cabinet panel.

Use the four mounting screws to reattach the rear cabinet panel removed in step (4) in its original position.



8. Reattach the front panel of the sorter.

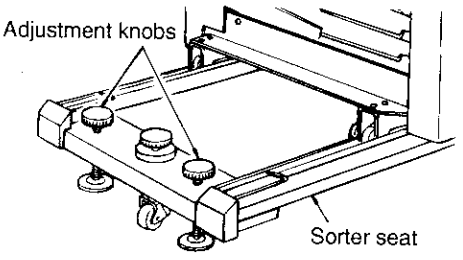
Use the four mounting screws to reattach the front panel of the sorter removed in step (3) in its original position.

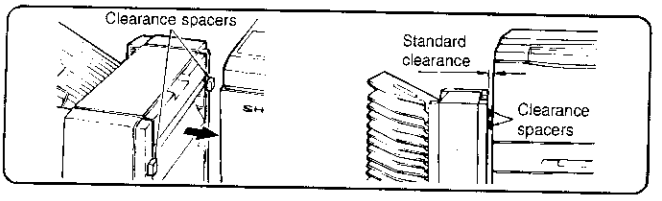


9. Adjust the clearance between the sorter and the copier.

Push the sorter gently against the copier's left cabinet panel. The clearance spacers attached to the back of the sorter will determine the standard clearance between the sorter and the copier. Turn the adjustment knobs on the sorter seat to adjust the clearance so that the spacers are touching the copier.

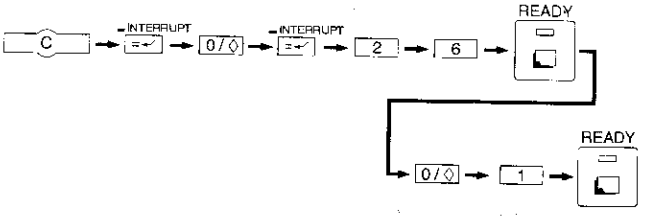
After adjusting the clearance, remove the clearance spacers.





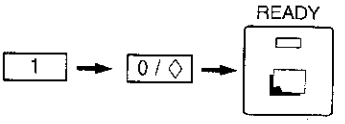
10. Set the mode.

- Operate the keys on the copier to set the mode.

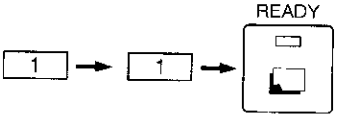


The above key operation will display the currently set mode.

- If only the SF-S15 is to be set, immediately after the above key operation, operate the keys as follows:

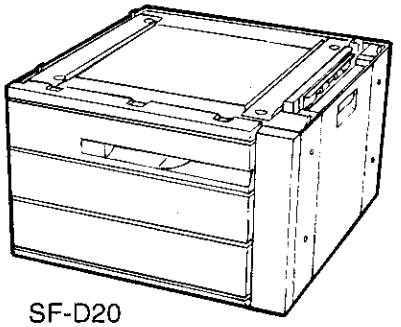


- If the mode is to be set for a combination with other options, add up the total of the setting values for all the peripheral devices to be set from the table shown below, and set theat total value.

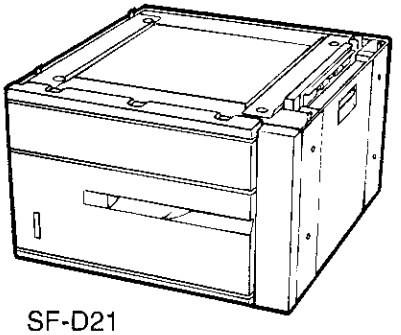


SF-A17/A56	1	SF-D20/21	4	Sorter	10

(7) SF-D20/21



SF-D20



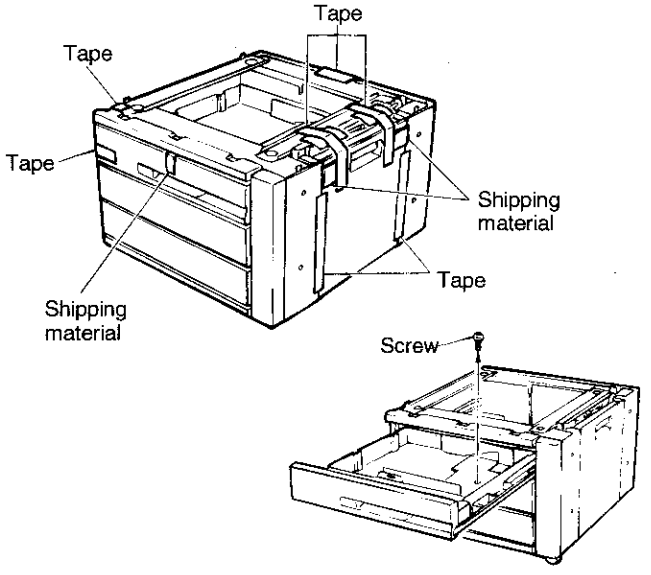
SF-D21

Included parts

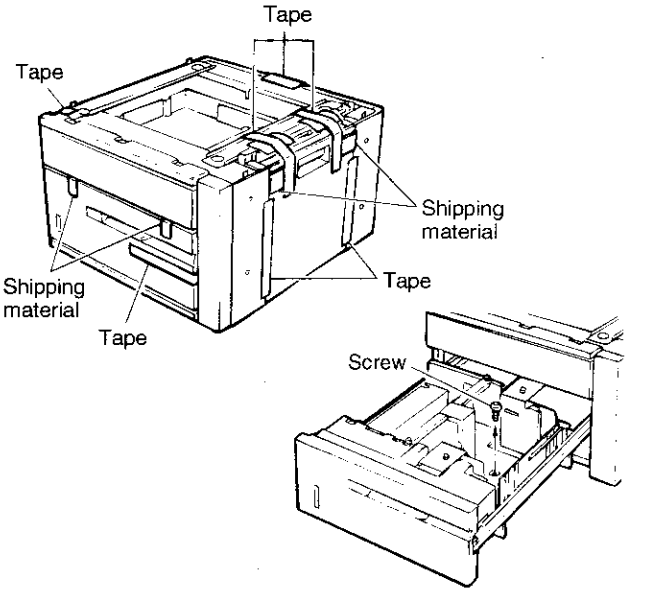
Mounting screws: 4

Before installation, remove all of the screws, tape, and shipping material as shown below.

D20



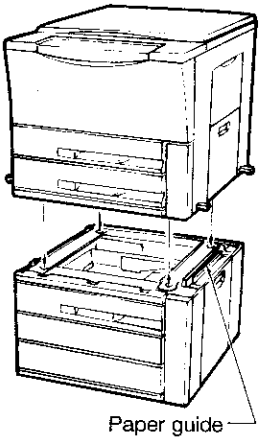
D21



Be sure to unplug the copier before carrying out the following procedures.

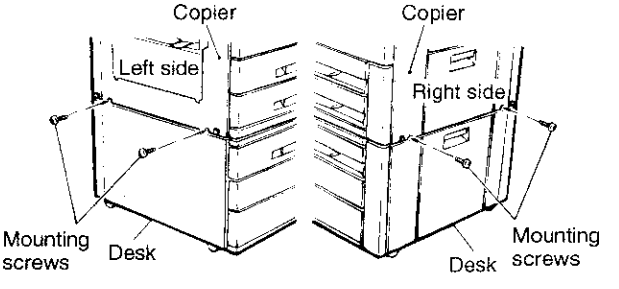
1. Place the copier on the desk.

Place the copier on the desk so that the feet of the copier fit into the corresponding holes in the desk.
When doing this, be careful that the copier does not come to rest on the paper guide or other parts of the desk that might be damaged by the weight of the copier.



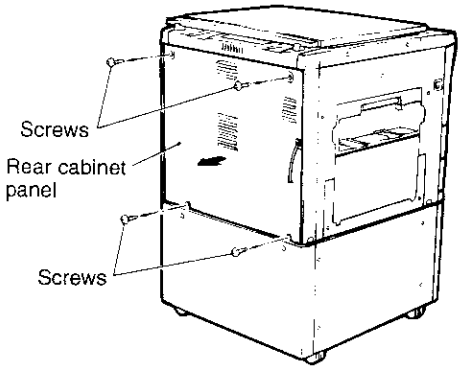
2. Secure the copier to the desk.

Use the included four mounting screws to secure the copier to the desk.
In addition to securing the copier to the desk, these screws also function to electrically ground the desk, so be sure to tighten all four mounting screws securely.



3. Remove the rear cabinet panel from the copier.

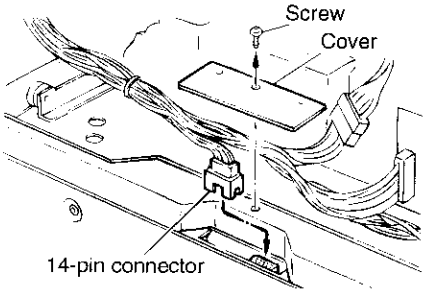
Remove the rear cabinet panel by removing the four screws which secure it to the copier.



4. Connect the desk relay harness.

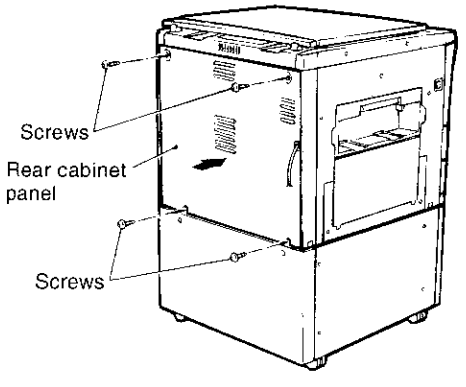
Remove the screw which secures the cover of the connector access hole in order to remove the cover.
Next, remove the temporary connector which is attached to the 14-pin connector of the desk relay harness, and connect the 14-pin connector to the connector on the desk.

* Note that the temporary connector will no longer be used.



5. Remount the rear cabinet panel onto the copier.

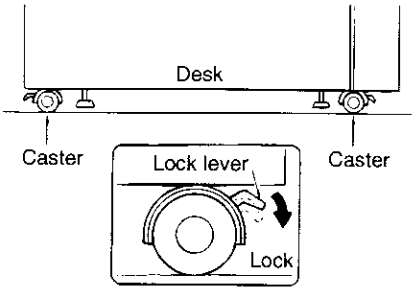
Remount the rear cabinet panel which was removed in Step 3 in its original position and secure it with the four mounting screws.



6. Move the copier to the desired installation location.

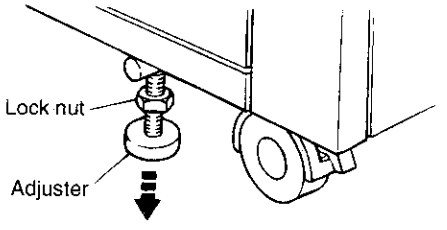
7. Lock the casters.

Move the lock levers of the two casters (one each left and right) at the front side of the desk downward in the direction indicated by the arrow in order to lock the casters.



8. Lower the adjuster to secure the desk in place.

Use pliers or a wrench to loosen the lock nut of the adjuster, and then turn the adjuster to lower it to the floor in order to secure the desk in place.
After lowering the adjuster, re-tighten the lock nut all the way up as far as it will go in order to lock the adjuster.

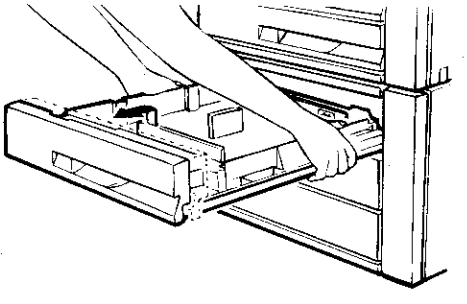


★ For the SF-D20

(The initial paper size setting is A4R for the AB system and 8 1/2 x 11R for the inch system.)

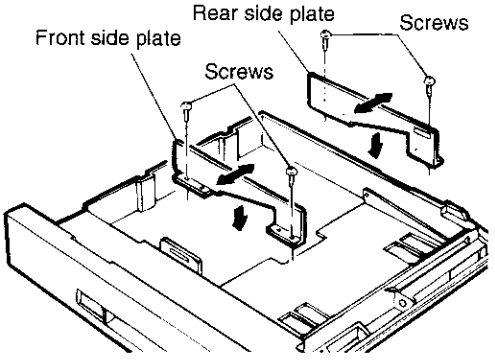
9. Pull out the paper cassette.

Lift up on the handle on the paper cassette and pull the cassette out from the desk until it stops, and then lift up on both sides of the back of the cassette in order to pull it all the way out of the desk.



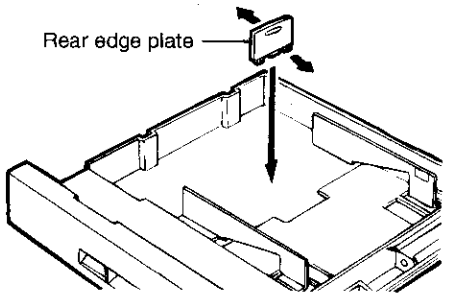
10. Adjust the positions of the front and rear side plates.

Remove the mounting screws (two each) which secure the front and rear side plates, fit the two side plates into the appropriate positions marked on the cassette corresponding to the desired paper size, and then secure the side plates once again with the mounting screws (two each).



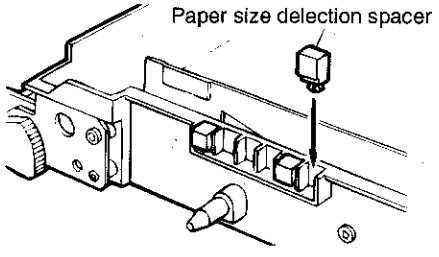
11. Adjust the position of the rear edge plate.

Remove the rear edge plate and fit it into the cassette at the position corresponding to the desired paper size.



12. Set the paper size detection spacer.

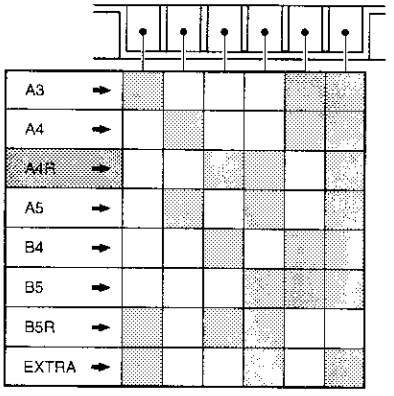
Change the position of the paper size detection spacer to the position corresponding to the desired paper size.



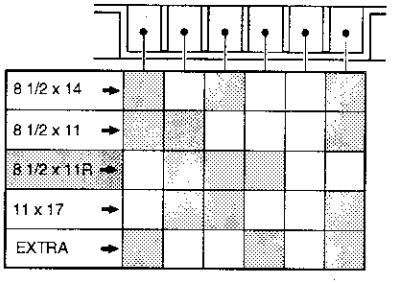
(Example: Position for A3 size paper)

Paper size detection spacer position diagram

AB system



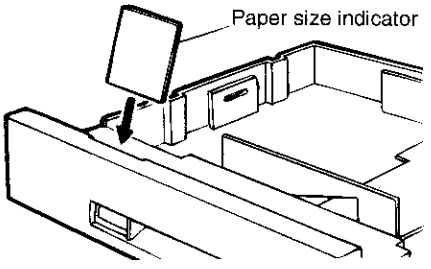
Inch system



13. Change the paper size indicator.

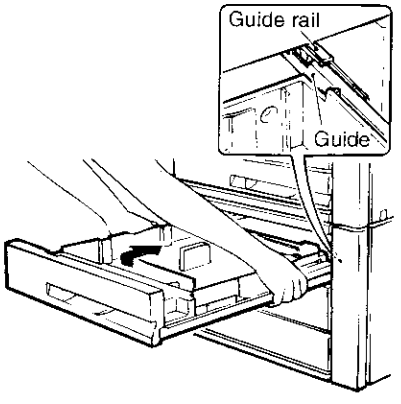
Remove the paper size indicator and re-insert it so that the paper size for which the cassette has been set is visible in the paper size indication window.

Note that paper size indications are printed on both sides of the paper size indicator.



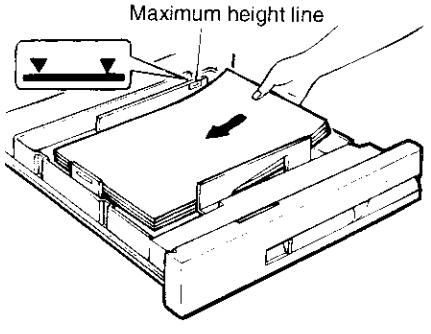
14. Re-insert the paper cassette.

Lift up on both sides of the back of the paper cassette and, while aligning the right guide on the cassette with the guide rail as shown in the figure, push the cassette into the desk along the guide rails.
After doing this, confirm that the cassette moves in and out smoothly.



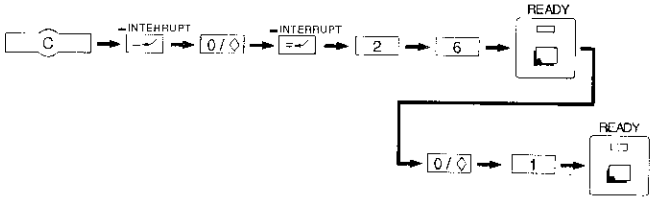
15. Place the paper in the cassette.

Place the paper in the paper cassette.
When doing this, do not stack the paper higher than the maximum height line indicated on the cassette.
Next, push the cassette all the way into the desk as far as it will go.



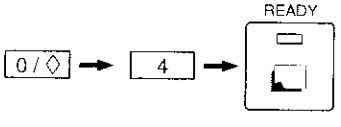
16. Set the mode.

- Operate the keys on the copier to set the mode.



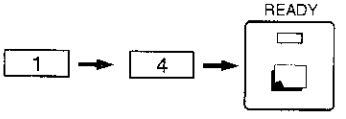
The above sequence of key operations will display the current setting value.

- If only the SF-D20 is being set, immediately after the above key operation sequence, perform the following key operation sequence to set the mode.



- If the mode is to be set for a combination of optional equipment, add together the setting values shown in the table below for each peripheral device, and set the mode to the total setting value.

  For example, to set the mode for a combination of the SF-D20 and the SF-S53, the total setting value is 4 + 10 = 14, so the key operation sequence is as follows.



SF-A17/A56	1

SF-D20/D21	4

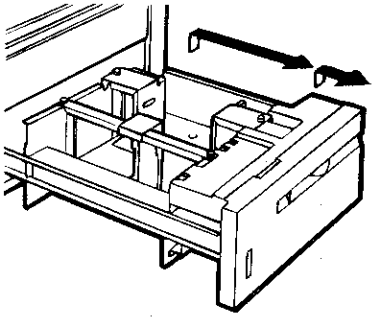
Sorter	10

★ For the SF-D21

(The initial paper size setting is A4 for the AB system and 8 1/2 x 11 for the inch system.)

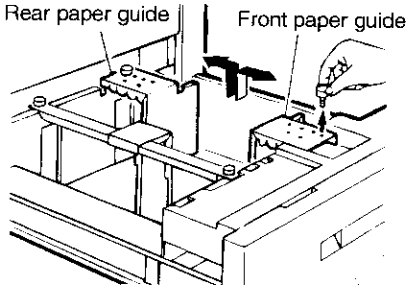
17. Pull out the large-capacity paper cassette.

Lift up on the handle on the paper cassette and pull the cassette out from the desk until it stops (the paper loading position), and then lift up on the casette handle once again and pull the cassette all the way out of the desk.



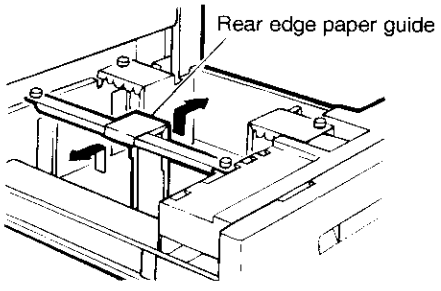
18. Adjust the positions of the front and rear paper guides.

Remove the mounting screws which secure the front and rear paper guides, fit the two paper guides into the appropriate positions corresponding to the desired paper size, and then also secure the mounting screws into the holes corresponding to the desired paper size.



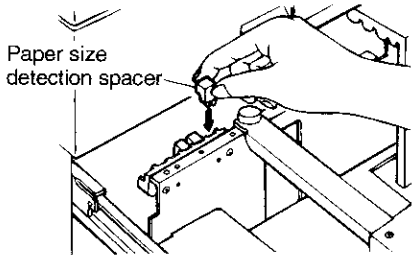
19. Adjust the position of the rear edge paper guide.

Loosen the two screws which secure the rear edge paper guide until it becomes possible to move the paper guide.
Next, fit the rear edge paper guide into the appropriate position corresponding to the desired paper size, and then also secure the two mounting screws into the holes corresponding to the desired paper size.



20. Set the paper size detection spacer.

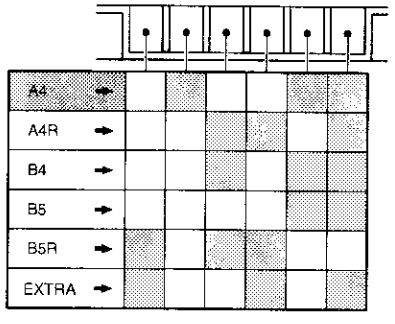
Change the position of the paper size detection spacer to the position corresponding to the desired paper size.



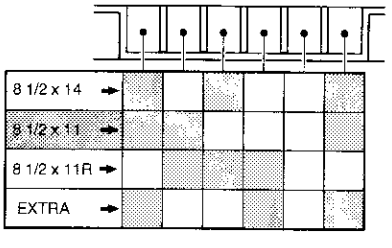
(Example: Position for A3 size paper)

Paper size detection spacer position diagrams

AB system

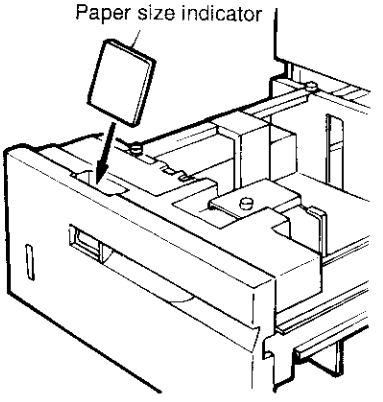


Inch system



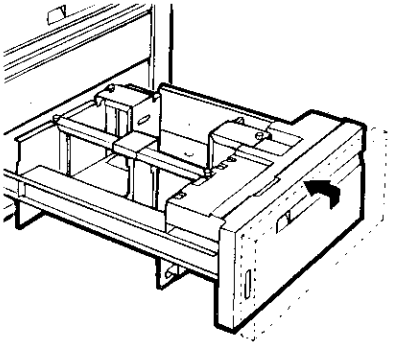
21. Change the paper size indicator.

Remove the paper size indicator and re-insert it so that the paper size for which the cassette has been set is visible in the paper size indication window.
Note that paper size indications are printed on both sides of the paper size indicator.



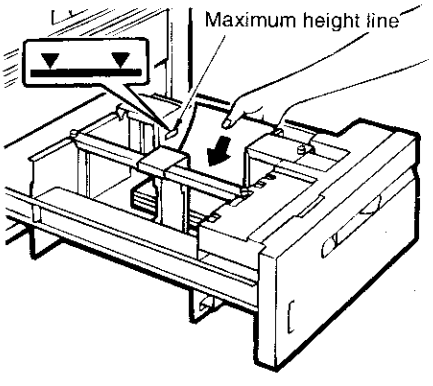
22. Re-insert the large-capacity paper cassette.

Lift up on the handle of the large-capacity paper cassette and re-insert in as far as the paper loading position.



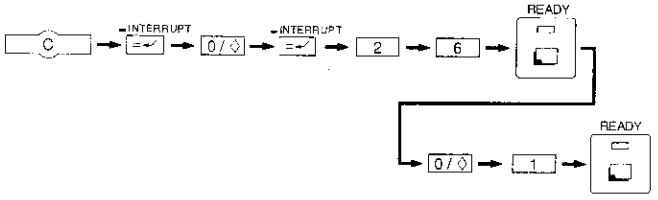
23. Place the paper in the cassette.

Place the paper in the paper cassette.
When doing this, do not stack the paper higher than the maximum height line indicated on the cassette.
Next, push the cassette all the way into the desk as far as it will go.



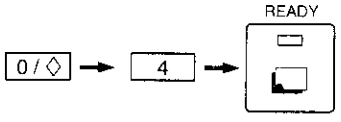
24. Set the mode.

- Operate the keys on the copier to set the mode.



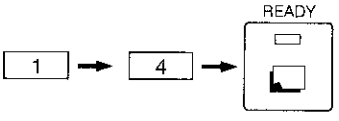
The above sequence of key operations will display the current setting value.

- If only the SF-D21 is being set, immediately after the above key operation sequence, perform the following key operation sequence to set the mode.



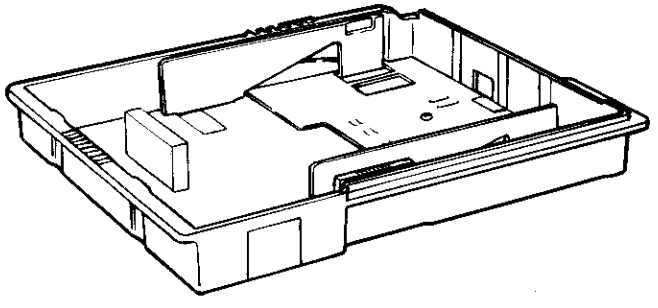
- If the mode is to be set for a combination of optional equipment, add together the setting values shown in the table below for each peripheral device, and set the mode to the total setting value.

For example, to set the mode for a combination of the SF-D21 and the SF-S14, the total setting value is 4 + 10 = 14, so the key operation sequence is as follows.



SF-A17/A56	1	SF-D20/21	4	Sorter	10

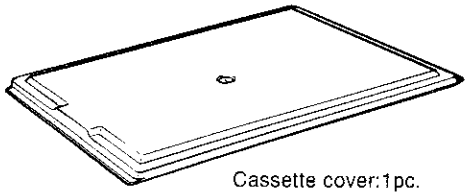
(8) SF-IC11



SF-IC11

Cassette main unit

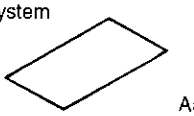
Parts included



Cassette cover:1pc.

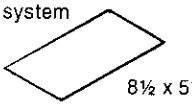
Size label for indication plate

AB system



A5 1sheet

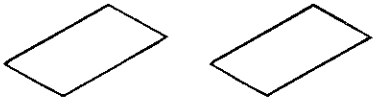
Inch system



8½ x 5½ 1sheet

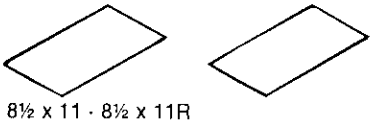
Cassette size label

AB system



A3 · A4 · A4R · A5 · B4 two sheets each

Inch system



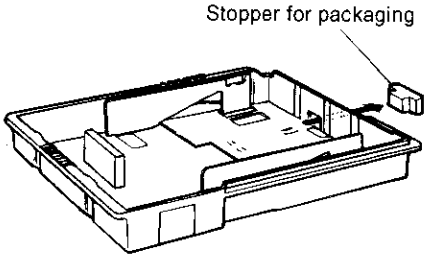
8½ x 11 · 8½ x 11R
8½ x 14 · 8½ x 5½
11 x 17 two sheets each

✳ Be sure to store any parts with care that are not used because they are necessary for changing the papersize.

Before performing the following procedure, be sure to remove the power plug of the copier main unit.

1. To remove the stopper for the packaging cassette unit.

Remove the stopper for the packaging the paper pressure plate in the cassette unit.



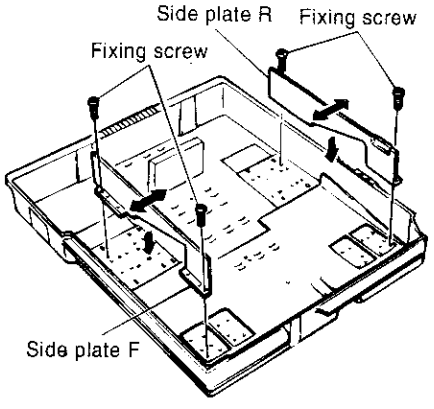
When using default setting:

★ Skip to step 7 and perform the following steps.
Initial set paper size is A3 or 11 x 17.

When using after changing paper size:

2. To change the size setting of side plate F and side plate R.

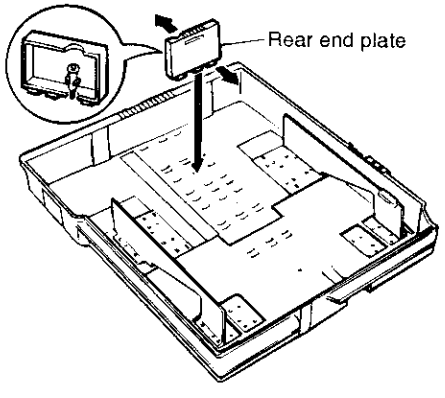
Insert side plate F and side plate R into the cassette main unit and align them on the marking for the desiredsize, and secure the side plates with fixing screws (2 pcs. each).



3. To change the size position of the rear end plate.

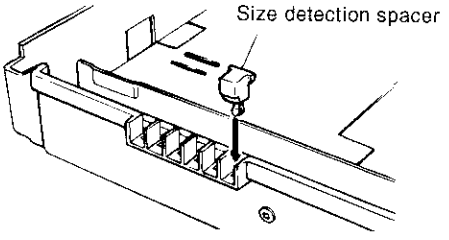
Remove the rear end plate from its rear storage place, and insert this into the cassette main unit for the desired size.

When you switch the size to A5 or 8½ x 5½, fix this plate to the rotary plate by using the screw that is attached to the rear end plate.



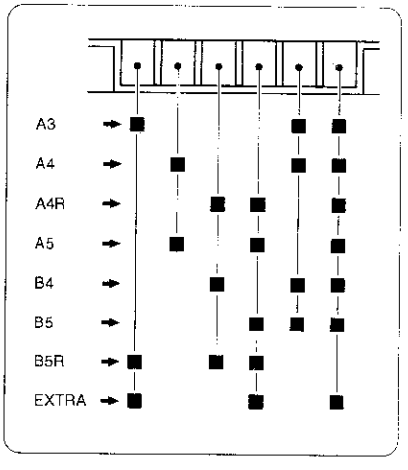
4. To set the size detection spacer.

Reposition the size detection spacer for the desired paper size.

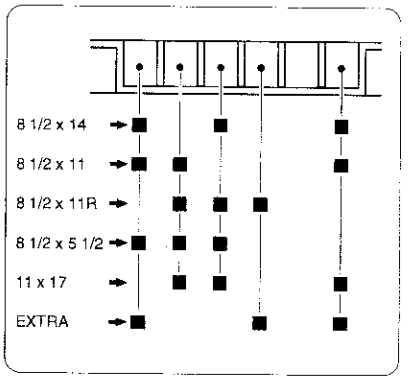


Setting diagram for size detection spacer

(AB system)

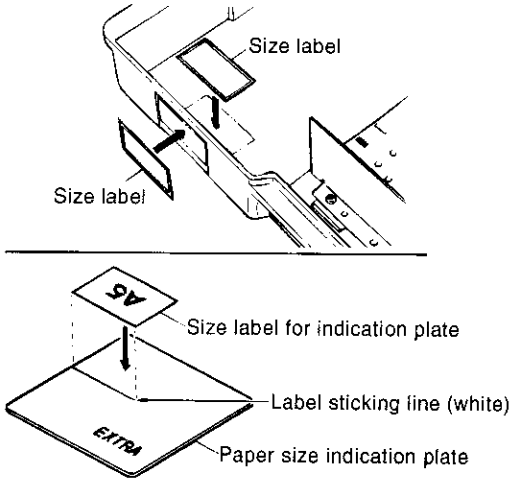


(Inch system)



5. To stick the cassette size labels.

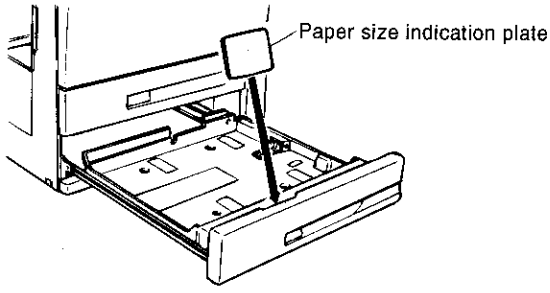
Stick the cassette size labels that indicate and correspond to the desired size on the marked positions for sticking (2 positions). If you change the size to A5 or 8-1/2 x 5-1/2, take out the paper size indication plateand stick the size label on the indication plate and align the sticking line as shown in the figure.



6. To change the paper size indication plate.

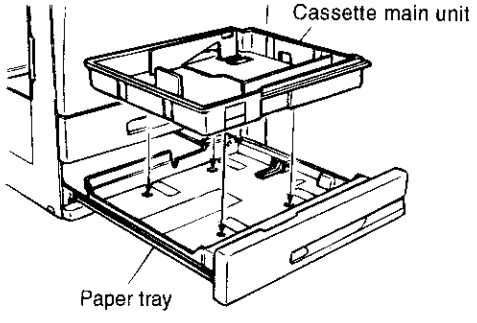
Take out the paper size indication plate and insert it so that the name of set paper size can be seen through the paper size indication window.

The paper size is written on both front and rear faces of the paper size indication plate.

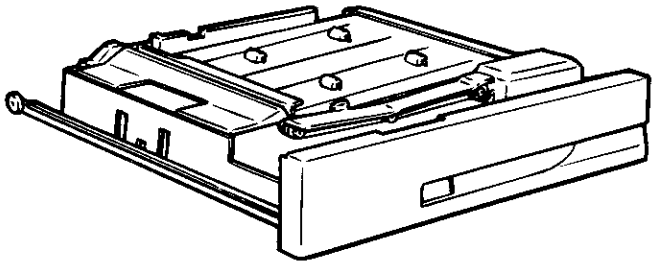


7. To install the cassette main unit on the paper tray.

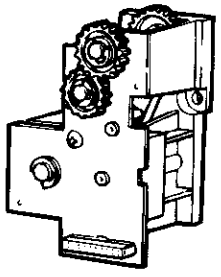
Install the cassette main unit by putting the four projections into the corresponding holes of the paper tray.



(9) SF-DM11



Parts included



ADU drive unit:1pc.

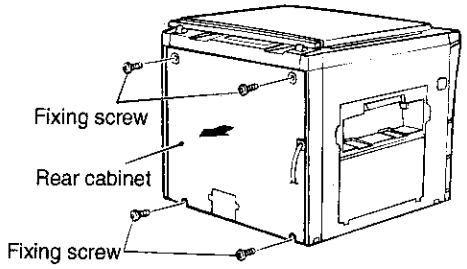
Right stopper:1pc.

Fixing screw(M4 x 8):2pcs.

Before performing the following procedure, be sure to remove the power plug of the copier main unit.

1. To remove the rear cabinet of the copier main unit.

Remove the four screws that fix the rear cabinet of the copier main unit and remove the rear cabinet.



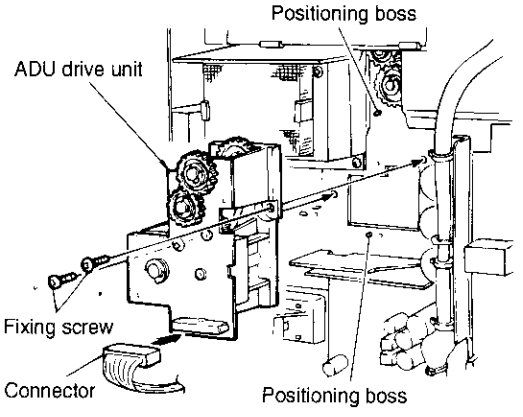
2. To install the ADU drive unit.

Remove the connector, that has been inserted temporarily to the connector near the copier main unit for connecting with ADU drive unit.

* The removed temporary connector, it will not be used.

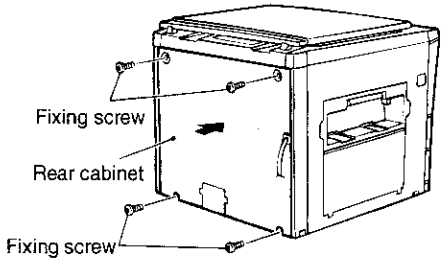
Install the ADU drive unit to the two positioning bosses on the rear frame of the copier main unit, and secure this with two fixing screws.

Then, connect the connector near the copier main unit, to that of the ADU drive unit.



3. To install the rear cabinet of the copier main unit.

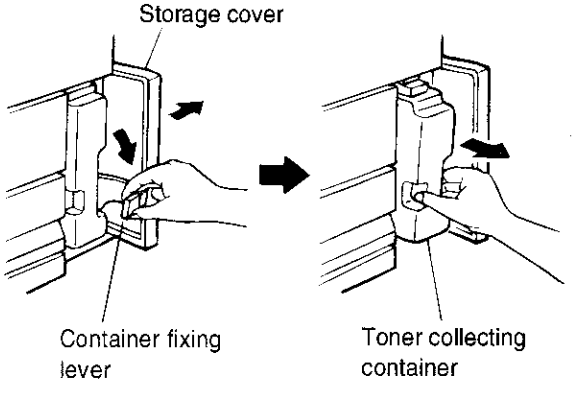
Reinstall the rear cabinet that has been removed in step 1 with four fixing screws.



4. To remove the toner collecting container.

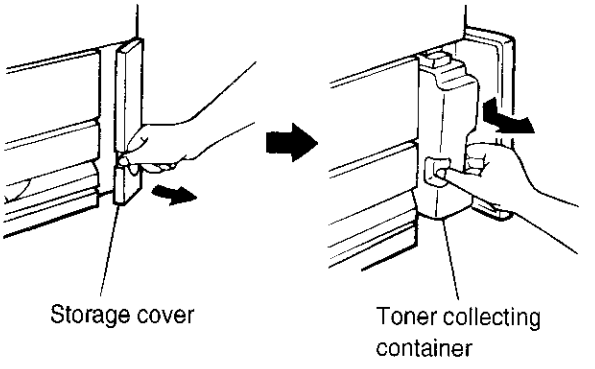
• When a container fixing lever is installed

Open the storage cover for the toner collecting container, pull the container fixing lever to your side and remove the container.



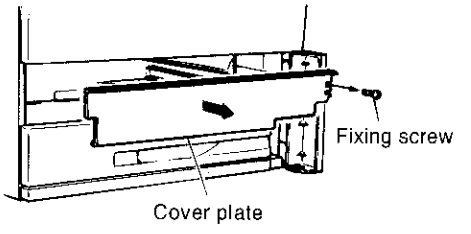
• When a container fixing lever is not installed

Open the storage cover for the toner collecting container, then remove the toner collecting container by pulling out and pressing down on it at the same time.



5. To remove the cover plate.

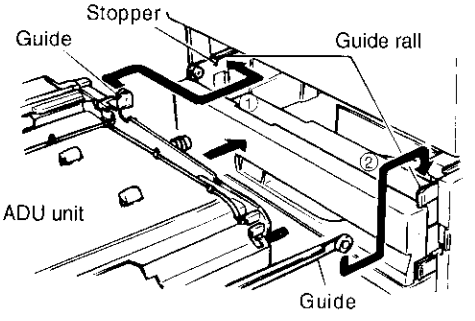
Remove the screw that fixes the cover plate and remove the cover plate.



6. To install the ADU unit.

Install the ADU unit by inserting the guides to the guide rails.

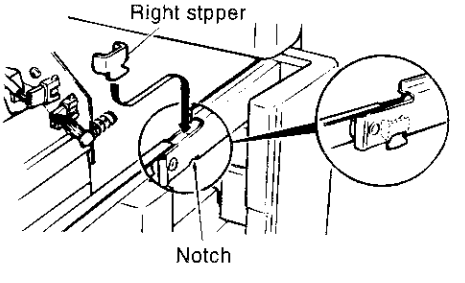
At this time, the wheel for the left guide of the ADU unit should be behind the stopper on the left guide rail.



7. To install the right stopper.

Insert the right stopper into the notch before the wheel for the right guide of the ADU unit as shown in the figure.
At the time, ensure that the right side of the ADU unit is locked.

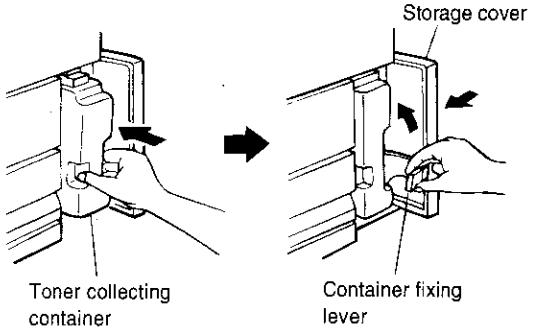
Then push the ADU unit to the innermost recess of the copier main unit.



8. To install the toner collecting container.

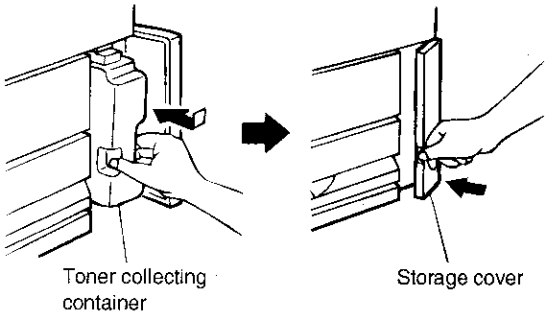
• When a container fixing lever is installed

Reinstall the toner collecting container that has been removed in step 4, restore the container fixing lever, and close the storage cover for the toner collecting container.



• When a container fixing lever is not installed

Reinstall the toner collecting container that has been removed in step 4. Press it down to its original position and push it into the machine as far as it will go. Close the storage cover.

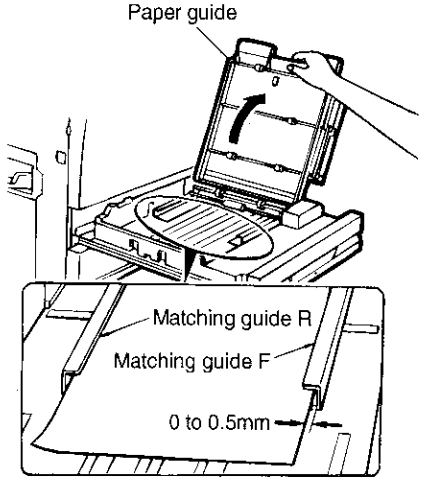


9. To check and adjust the matching guide.

① Mark a duplex copy.

② Remove the duplex unit from the copier main unit, and open the paper guide.

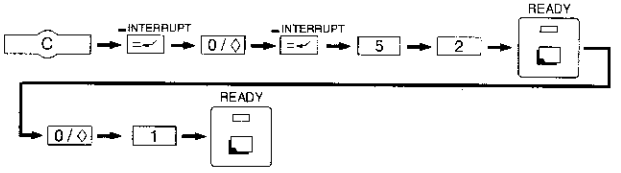
③ Set the copy that has been made in step I or a sheet of the same size on the duplex tray. Align the paper to either alignment guide F, or R, to check the gap. Check to see if the gap between either of the alignment guides and the paper is from 0 to 0.5 mm.



When the matching guide is aligned properly, perform step 10 in the Installation Procedure.

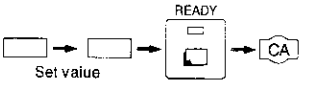
When the matching guide is not aligned properly, perform the following Procedure to adjust the matching guide.

A. Set the mode using the following key operation on the copier main unit:

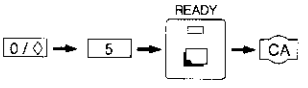


Then current set value is displayed.

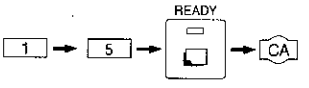
B. To set the adjustment mode, input the set value as shown below after the operation above:



(Example) To set a value (5) with one digit, perform the following operation:



(Example) To set a value (15) with two digit, perform the following opeartion:



Changing the set value by (1) causes the matching guide width to move 0.5mm to 0.6mm.

* Criterion for changing set value

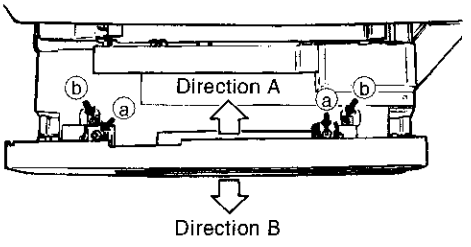
1 ⟵ Factory setting value ⟶ 99

(Guide width becomes larger.) (Guide width becomes smaller.)

C. Perform the steps ① to ③ again to check the width.

10. To adjust the center dislocation.

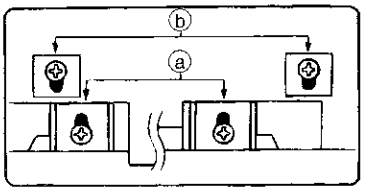
When copy result shows center dislocation as shown in Fig. 1 and Fig. 2, loosen the four screws (indicated by ↓) that fix the front cabinet.



Caution:

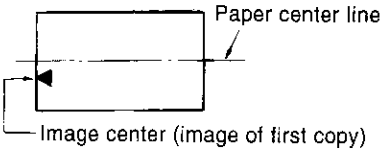
When you fix the front cabinet, the gap between a fixing screw and the cabinet is symmetrical for the fixing screw sections ⓐ ⓑ.

(Reference drawing)



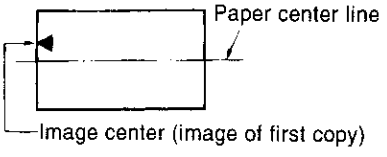
* In case of Fig. 1
Move the front cabinet to the direction A, tighten the fixing screws ⓐ (2 pcs.) and ⓑ (2 pcs.) in this order, and make a copy again to check that there is no center dislocation.

Fig.1



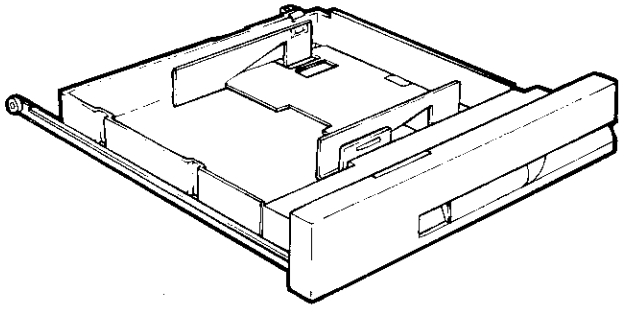
* In case of Fig. 2
Move the front cabinet to the direction B, tighten the fixing screws ⓐ (2 pcs.) and ⓑ (2 pcs.) in this order, and make a copy again to check that there is no center dislocation.

Fig.2

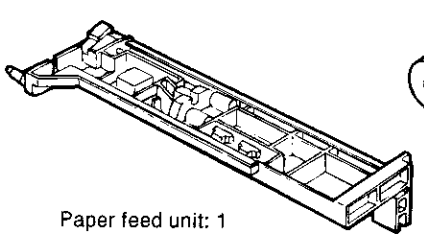


(10) SF-CM11

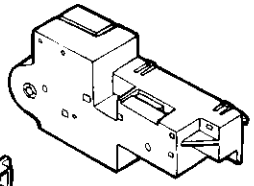
Paper Cassette



Included parts



Paper feed unit: 1



Lift-up unit: 1

Right stopper: 1

Mounting screws A (M4 x 30): 2

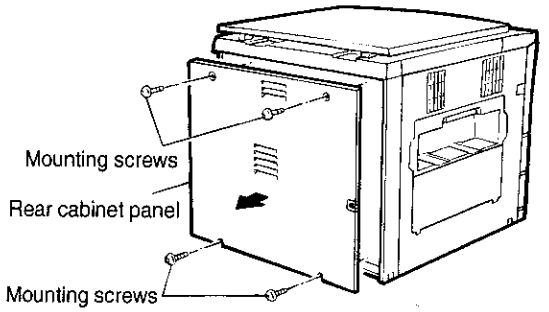
Mounting screws B (M4 x 10): 2

Be sure to unplug the copier and install the unit as follows:

★ Procedures for installation on the copier

1. Remove the rear cabinet panel from the copier.

Remove the rear cabinet panel by removing the four screws which secure it to the copier.

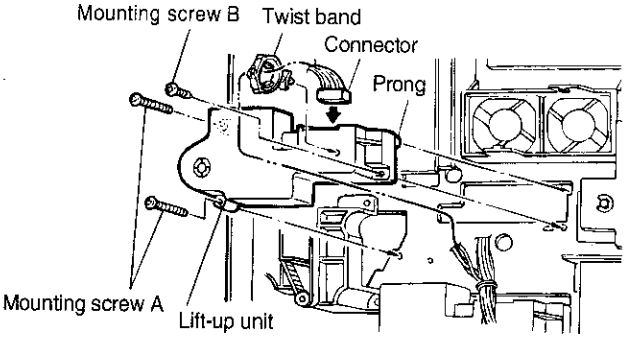


2. Install the lift-up unit.

Connect the connector (black colored) from the copier to the connector of the lift-up unit.

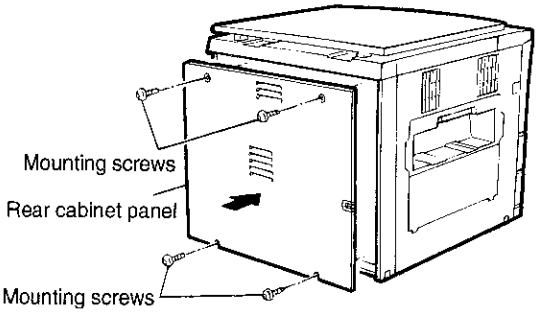
Next, hook the prongs on the lift-up unit into the rear frame of the copier, fit the lift-up unit into the positioning bosses (two locations), and secure it with the mounting screws A (2) and B (1).

Insert the twist band on the copier's harness into the lift-up unit.



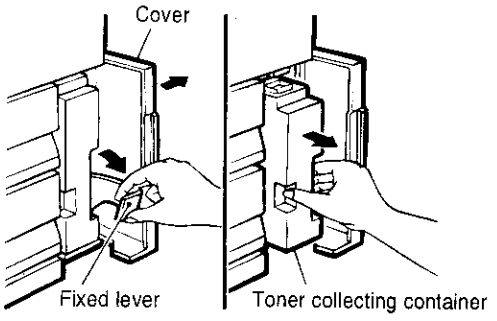
3. Remount the rear cabinet panel onto the desk.

Remount the rear cabinet panel which was removed in step 1 back in its original position and secure it with the four mounting screws.



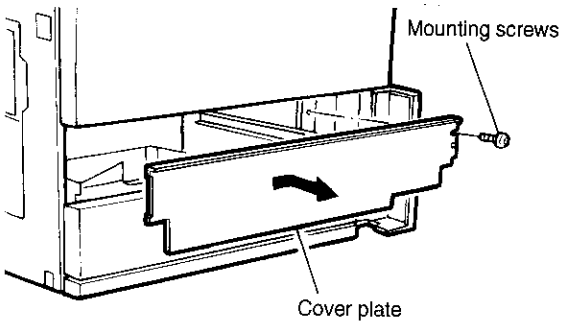
4. Remove the toner collecting container.

Open the toner collecting container cover, pull the fixed lever forward, and remove the container.



5. Remove the cover plate.

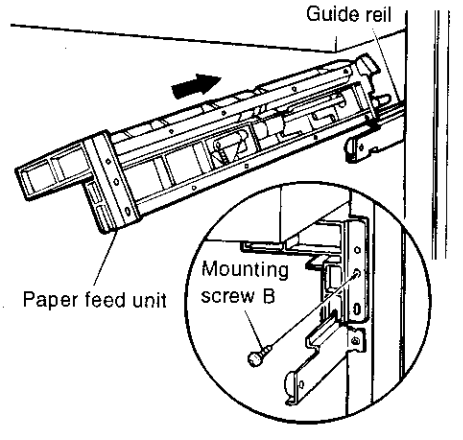
Remove the cover plate by removing the screw which secures it.



6. Install the paper feed unit.

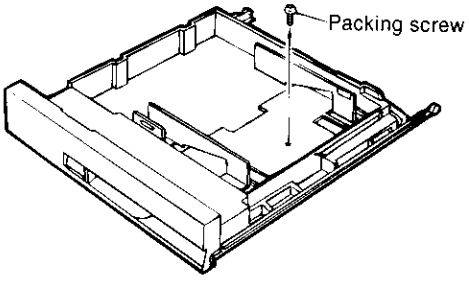
Fit the groove in the paper feed unit into the guide rail, and then, while tilting the paper feed unit at an angle of approximately 30°, slide it all the way back as far as it will go.

Fit the paper feed unit into the positioning bosses (two locations) on the desk frame, and secure it with one mounting screw B.



7. Remove the packing screw from the paper cassette.

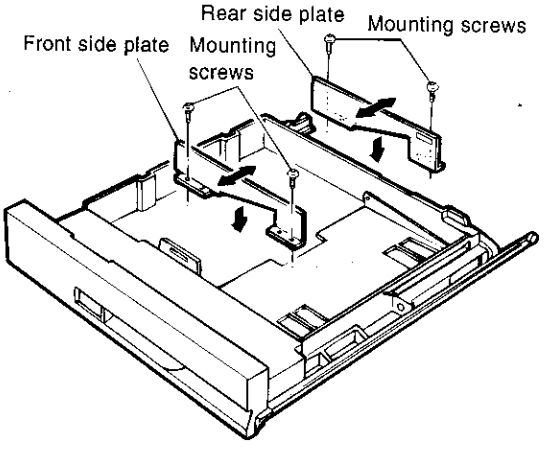
Remove the packing screw which secures the paper pressure plate inside the paper cassette.



The paper size is set to A4 for AB system and 8½" x 14" for inch system at the factory.

8. Change the positions of the front and rear side plates.

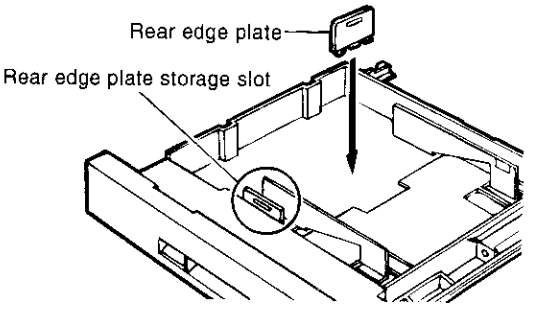
Remove the mounting screws (2 each) which secure the front and rear side plates, fit the front and rear side plates into the appropriate locations marked on the cassette to set the desired paper size, and then secure the side plates once again with the mounting screws (2 each).



9. Position the rear edge plate.

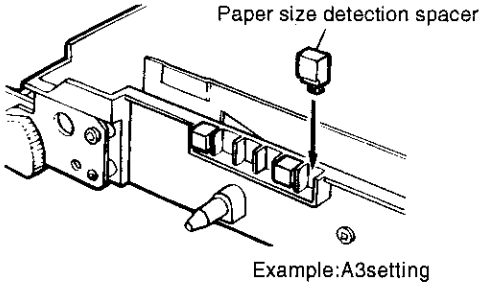
Remove the rear edge plate from its storage slot and fit it into the cassette to set the desired paper size.

The rear edge plate is not needed to set the paper size to 11" x 17" (double letter size).



10. Set the paper size detection spacer.

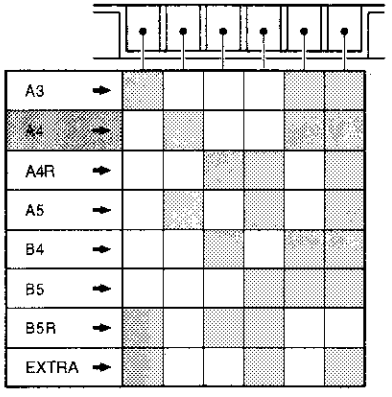
Change the position of the paper size detection spacer to match the desired paper size.



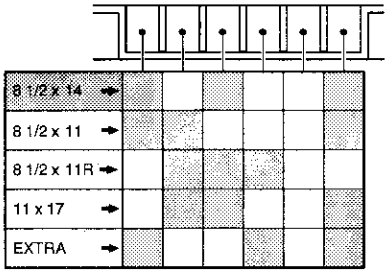
Example:A3setting

Paper size detection spacer position diagram

AB system



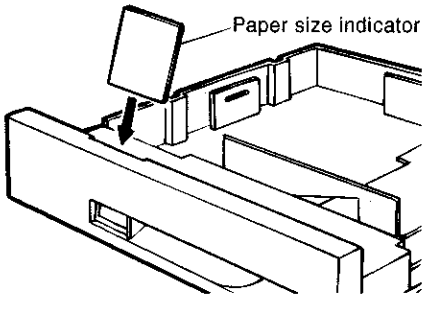
Inch system



11. Change the paper size indicator.

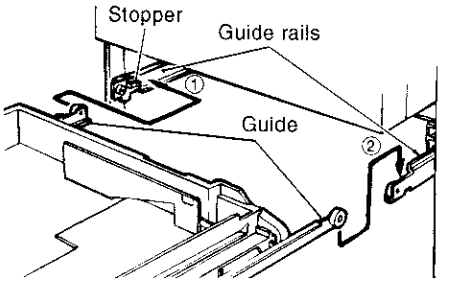
Remove the paper size indicator and reinsert it to show the paper size for which the cassette has been set in the paper size indicator window.

Note that paper sizes are printed on both sides of the paper size indicator.



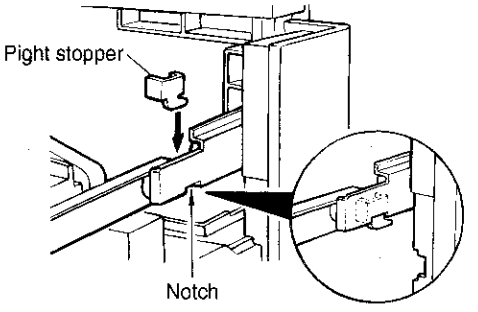
12. Fit the paper cassette guides into the guide rails.

Insert the paper cassette by fitting the guides of the paper cassette into the guide rails.
When doing this, insert the paper cassette all the way in so that the cassette's left guide roller goes past the stopper on the guide rail.



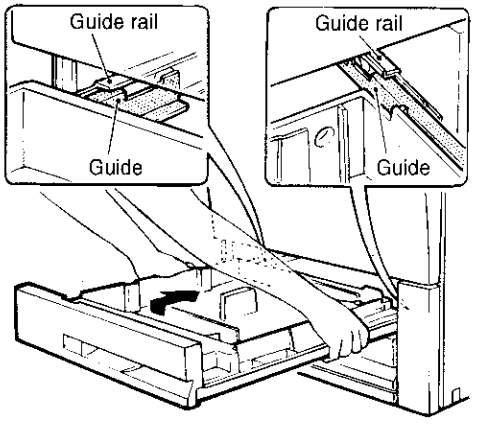
13. Mount the right stopper.

Fit the right stopper into the notch in front of the paper cassette's right guide roller as shown in the figure.
When doing this, confirm that the right side of the paper cassette is locked.



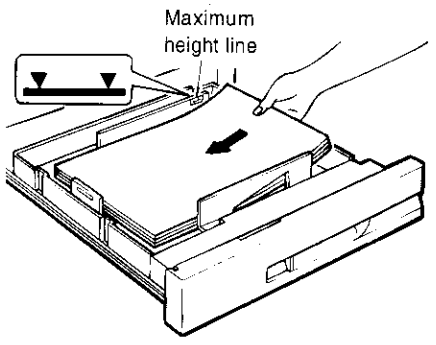
14. Install the paper cassette.

Lift the rear sides of the paper cassette and insert the both sides of guides into the Copier by fitting them to the guide rails as shown in the figure. Make sure that the paper cassette slides smoothly.



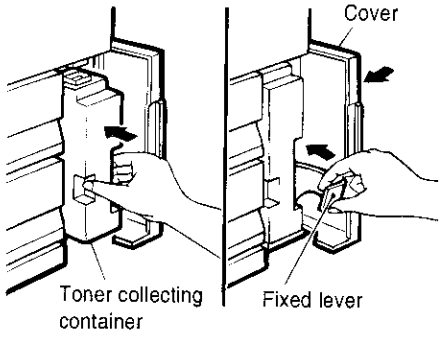
15. Place the paper.

Place the paper in the cassette.
Do not stack the paper higher than the maximum height line.
Next, push the cassette all the way into the copier.



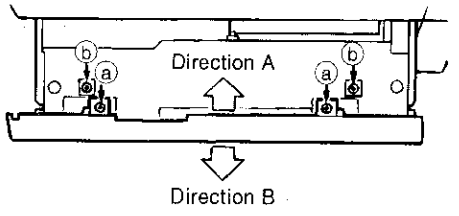
16. Install the toner collecting container.

Reinsert the toner collecting container which was removed in step 4 into its original position, return the fixed lever to its original position, and then close the cover.



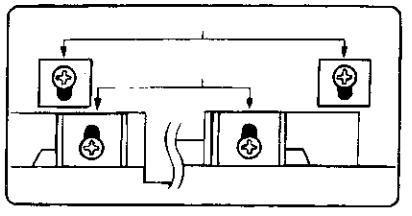
17. Adjust any center misalignment.

Make a copy, and if there is any center misalignment such as that shown in Fig. 1 or Fig. 2, loosen the four screws (indicated by the arrows) which secure the front cabinet panel.



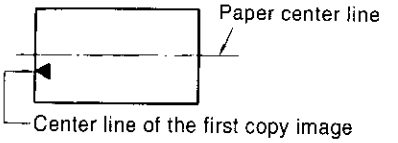
NOTE:
The mounting screws ⓐ and ⓑ will be in the symmetrical positions when they are tightened, as shown right.

(Reference figure)



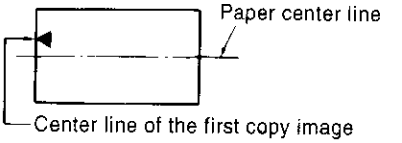
- If misaligned as shown in Fig. 1
  Move the front cabinet panel in direction A and retighten the two mounting screws ⓐ and then the other two screws ⓑ. Make another copy to confirm that the center is no longer misaligned.

Fig.1



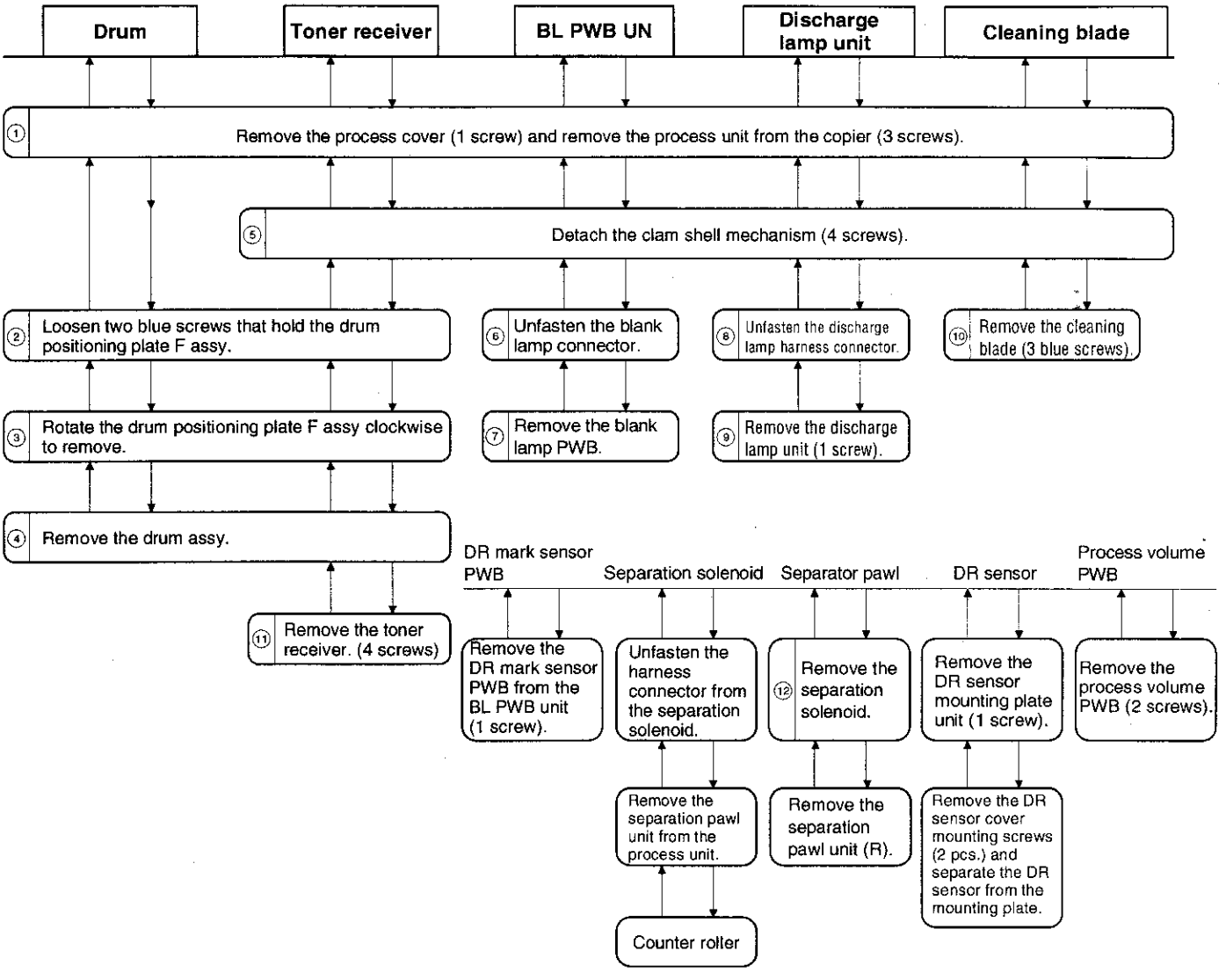
- If misaligned as shown in Fig. 2
  Move the front cabinet panel in direction B and retighten the two mounting screws ⓐ and then the other two screws ⓑ. Make another copy to confirm that the center is no longer misaligned.

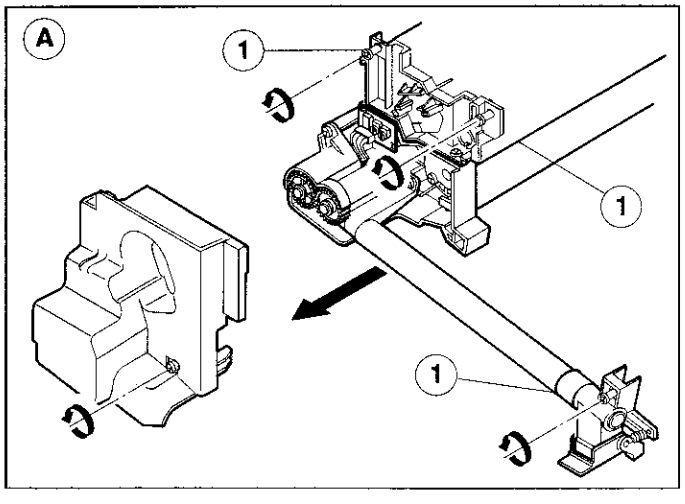
Fig.2

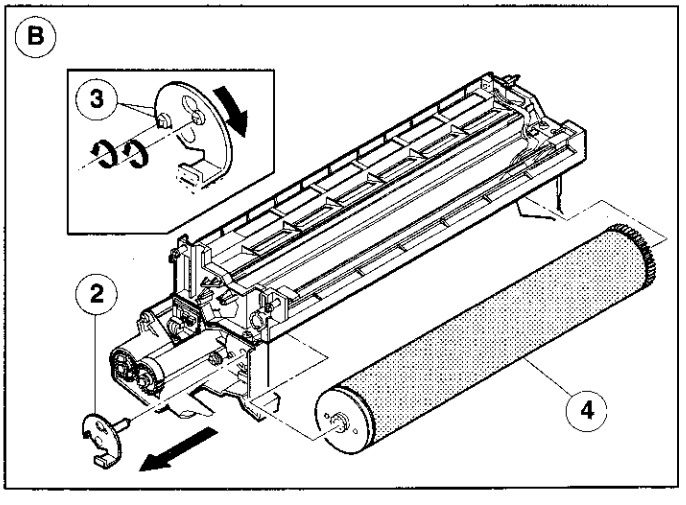


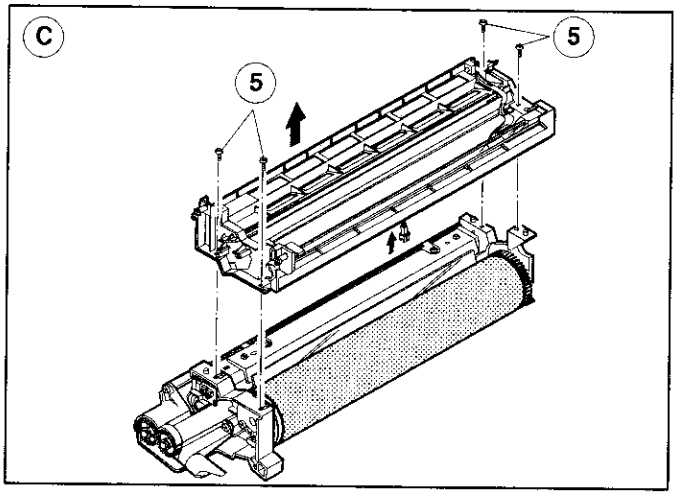
[6] DISASSEMBLY AND REASSEMBLY

1. Process unit


Drum
Toner receiver
BL PWB UN
Discharge lamp unit
Cleaning blade
① Remove the process cover (1 screw) and remove the process unit from the copier (3 screws).
⑤ Detach the clam shell mechanism (4 screws).
② Loosen two blue screws that hold the drum positioning plate F assy.
⑥ Unfasten the blank lamp connector.
⑧ Unfasten the discharge lamp harness connector.
⑩ Remove the cleaning blade (3 blue screws).
③ Rotate the drum positioning plate F assy clockwise to remove.
⑦ Remove the blank lamp PWB.
⑨ Remove the discharge lamp unit (1 screw).
④ Remove the drum assy.
⑪ Remove the toner receiver. (4 screws)
DR mark sensor PWB
Separation solenoid
Separator pawl
DR sensor
Process volume PWB
Remove the DR mark sensor PWB from the BL PWB unit (1 screw).
Unfasten the harness connector from the separation solenoid.
⑫ Remove the separation solenoid.
Remove the DR sensor mounting plate unit (1 screw).
Remove the process volume PWB (2 screws).
Remove the separation pawl unit from the process unit.
Remove the separation pawl unit (R).
Remove the DR sensor cover mounting screws (2 pcs.) and separate the DR sensor from the mounting plate.
Counter roller






C
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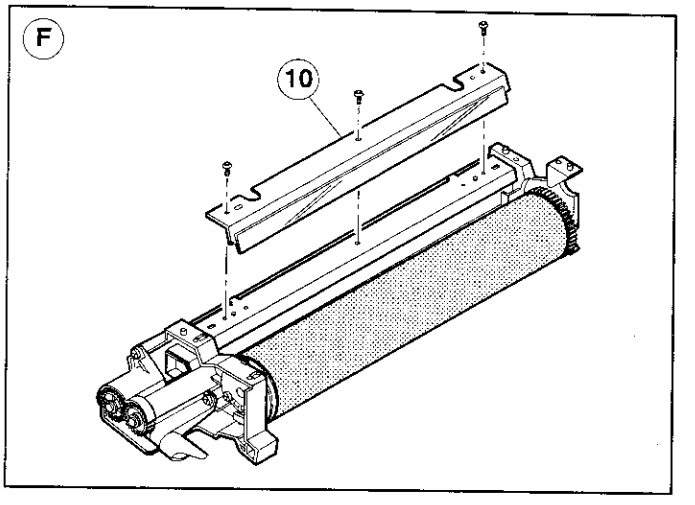
F
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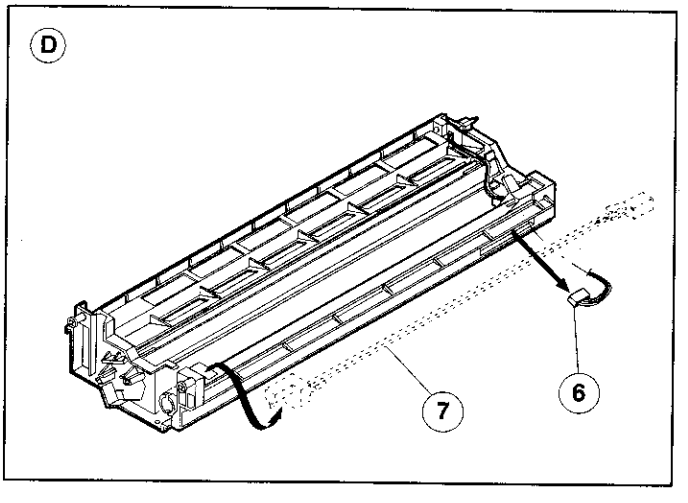
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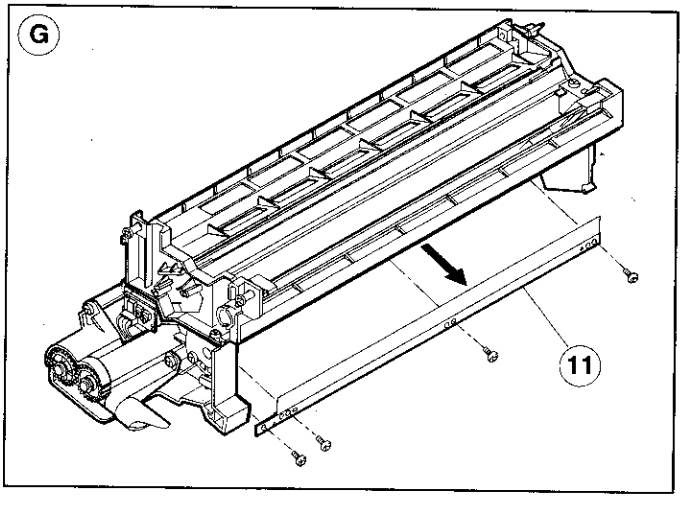
G
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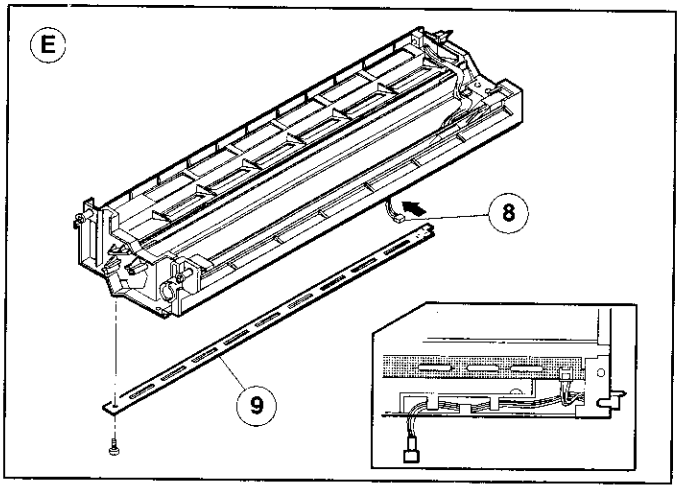
E
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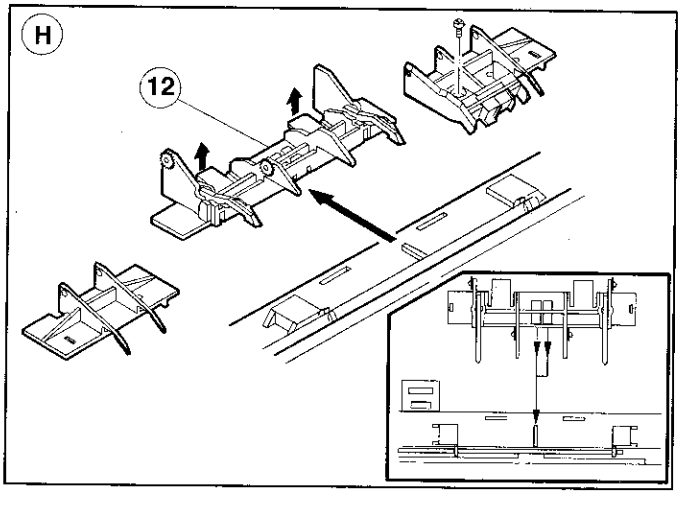
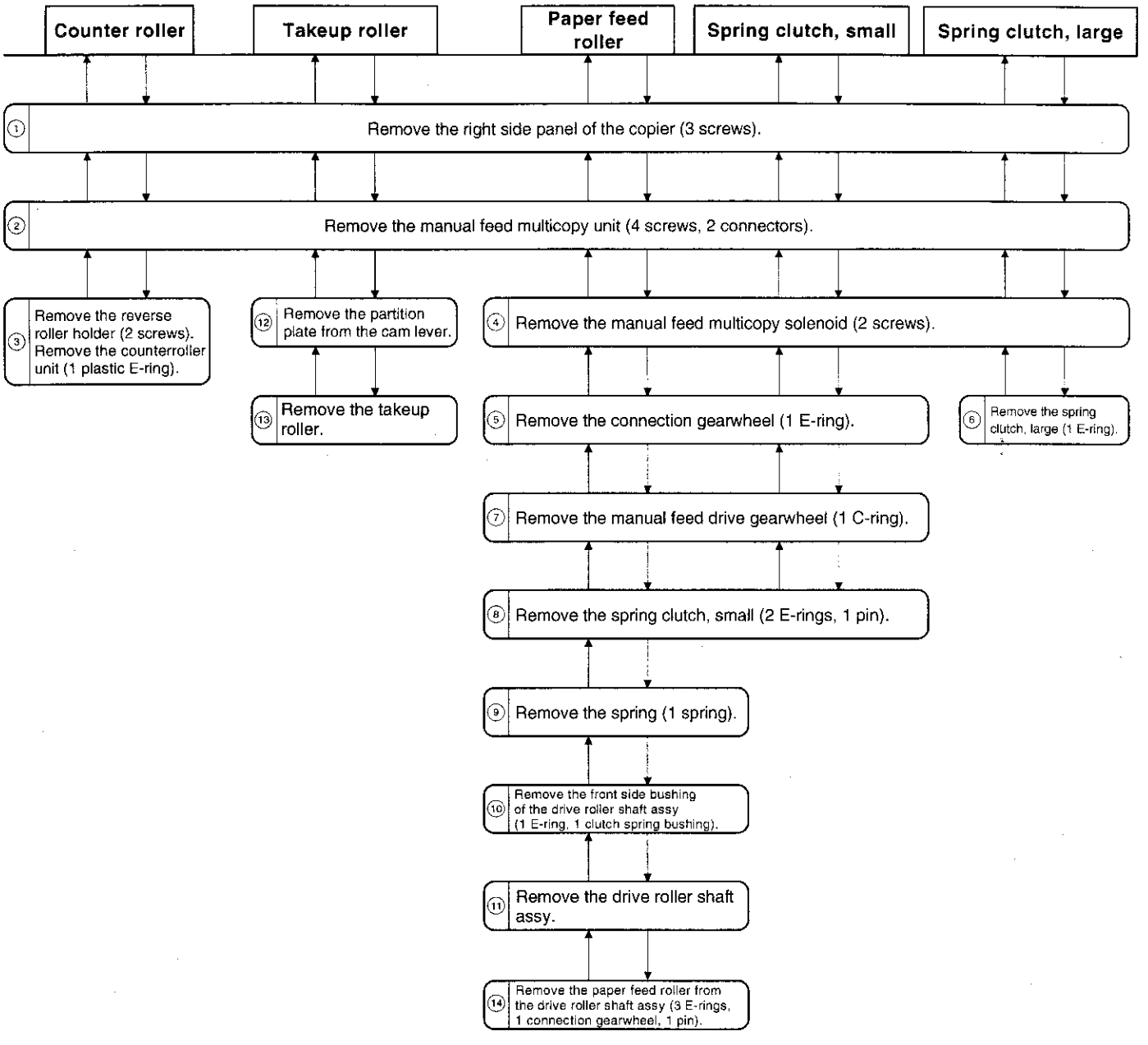
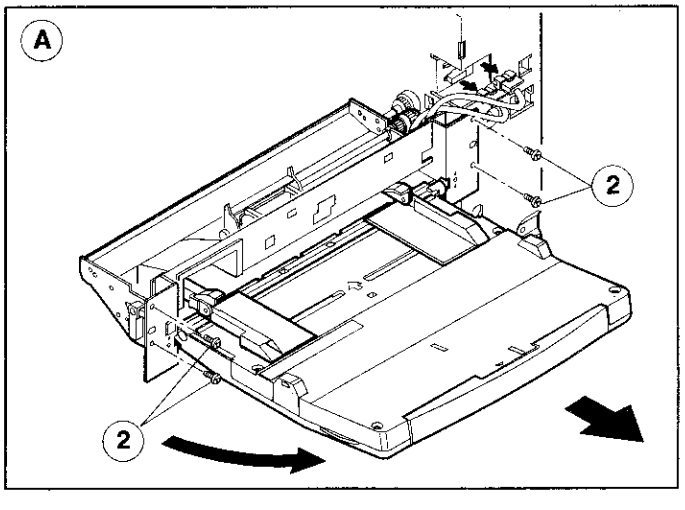
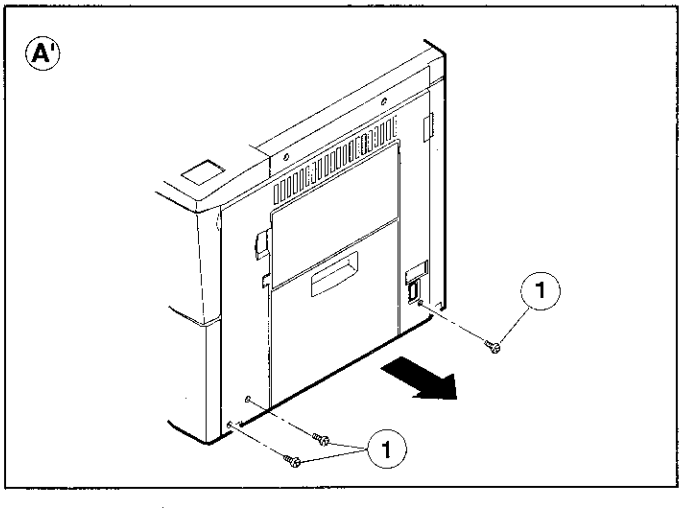
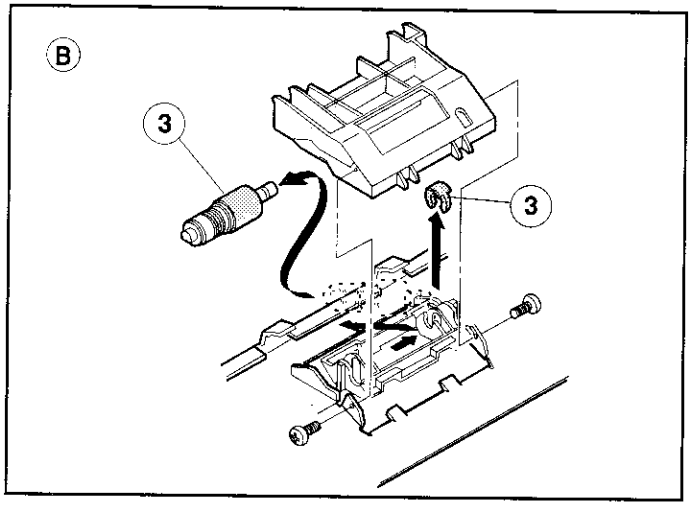

H
12

2. Manual feed multicopy unit


Counter roller
Takeup roller
Paper feed roller
Spring clutch, small
Spring clutch, large
① Remove the right side panel of the copier (3 screws).
② Remove the manual feed multicopy unit (4 screws, 2 connectors).
③ Remove the reverse roller holder (2 screws). Remove the counterroller unit (1 plastic E-ring).
⑫ Remove the partition plate from the cam lever.
⑬ Remove the takeup roller.
④ Remove the manual feed multicopy solenoid (2 screws).
⑤ Remove the connection gearwheel (1 E-ring).
⑥ Remove the spring clutch, large (1 E-ring).
⑦ Remove the manual feed drive gearwheel (1 C-ring).
⑧ Remove the spring clutch, small (2 E-rings, 1 pin).
⑨ Remove the spring (1 spring).
⑩ Remove the front side bushing of the drive roller shaft assy (1 E-ring, 1 clutch spring bushing).
⑪ Remove the drive roller shaft assy.
⑭ Remove the paper feed roller from the drive roller shaft assy (3 E-rings, 1 connection gearwheel, 1 pin).






B
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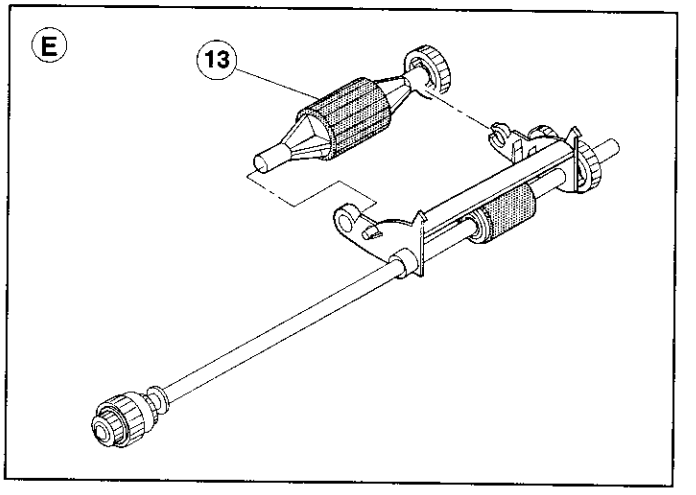
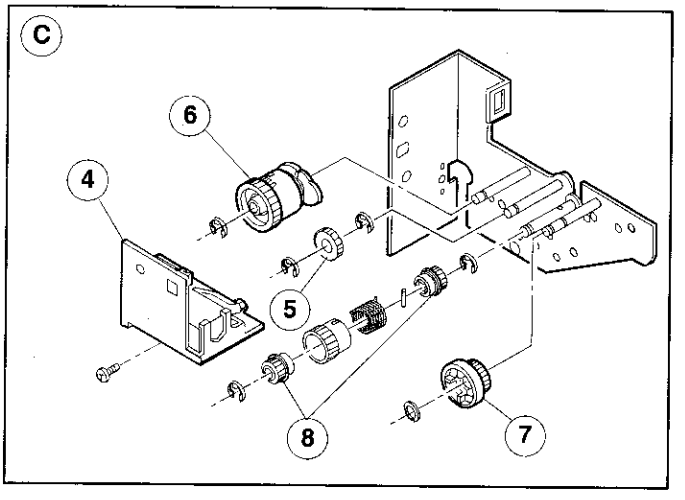
3


E
13


C
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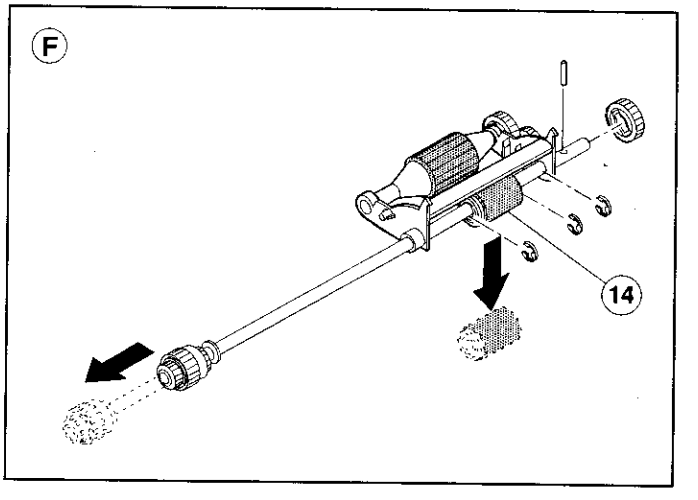
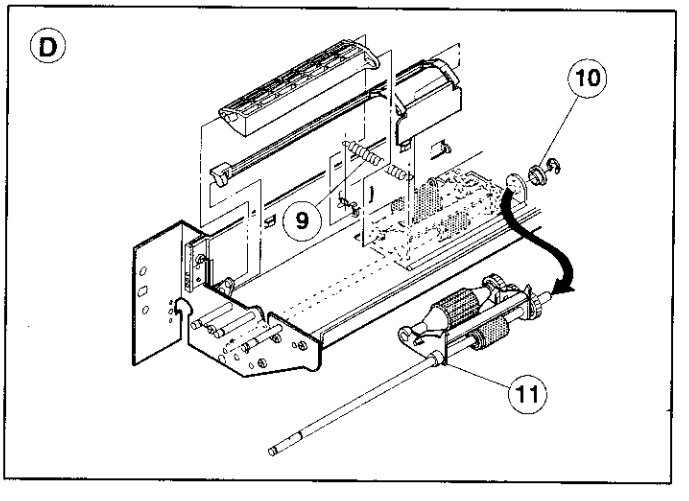

F
14


D
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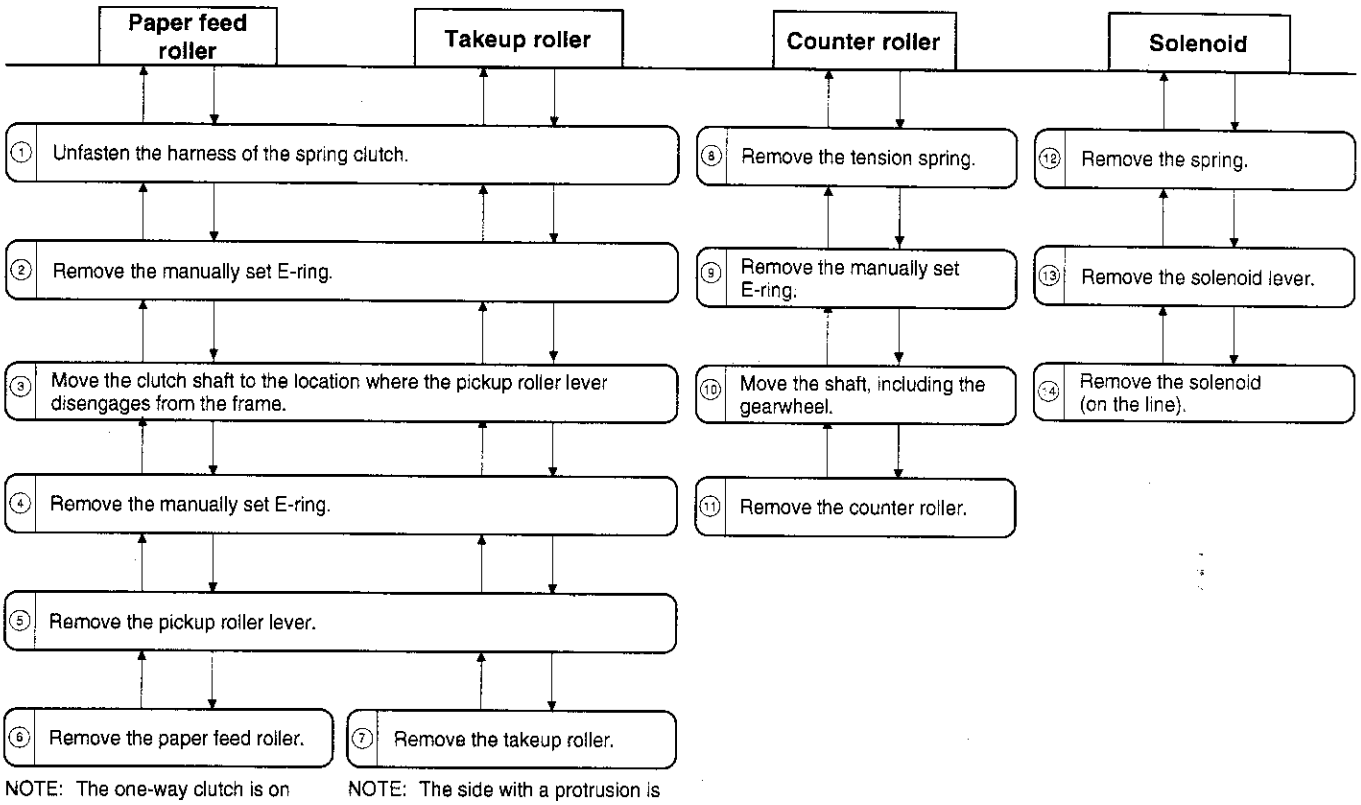
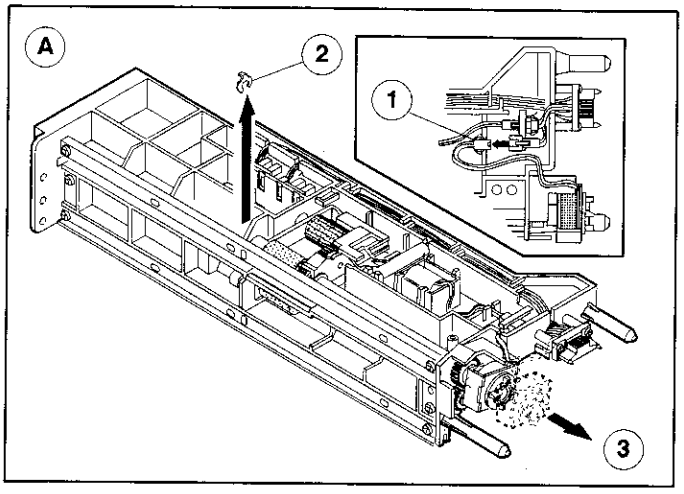
3. Paper feed unit


Paper feed roller
Takeup roller
Counter roller
Solenoid
① Unfasten the harness of the spring clutch.
② Remove the manually set E-ring.
③ Move the clutch shaft to the location where the pickup roller lever disengages from the frame.
④ Remove the manually set E-ring.
⑤ Remove the pickup roller lever.
⑥ Remove the paper feed roller.
⑦ Remove the takeup roller.
⑧ Remove the tension spring.
⑨ Remove the manually set E-ring.
⑩ Move the shaft, including the gearwheel.
⑪ Remove the counter roller.
⑫ Remove the spring.
⑬ Remove the solenoid lever.
⑭ Remove the solenoid (on the line).

NOTE: The one-way clutch is on the rear frame side (clutch side).

NOTE: The side with a protrusion is on the rear side.


A
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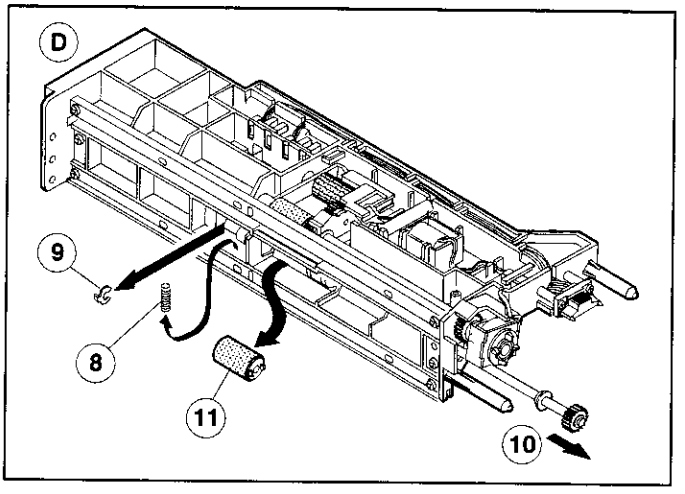
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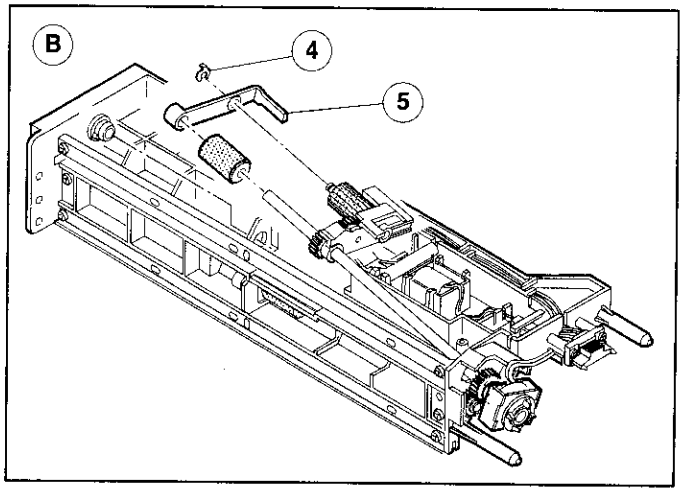
B
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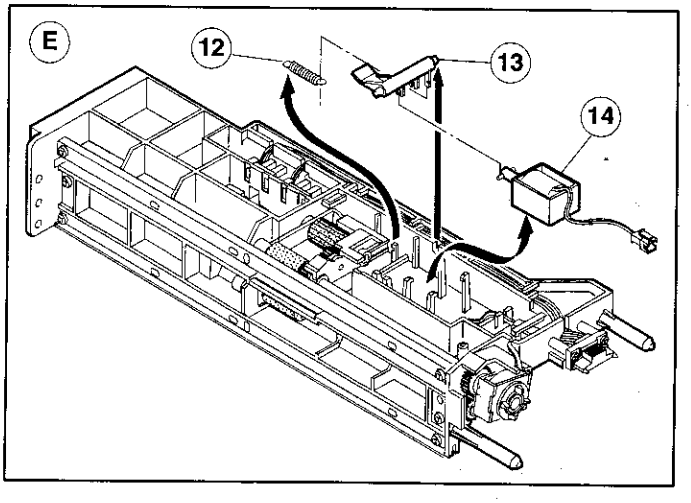
E
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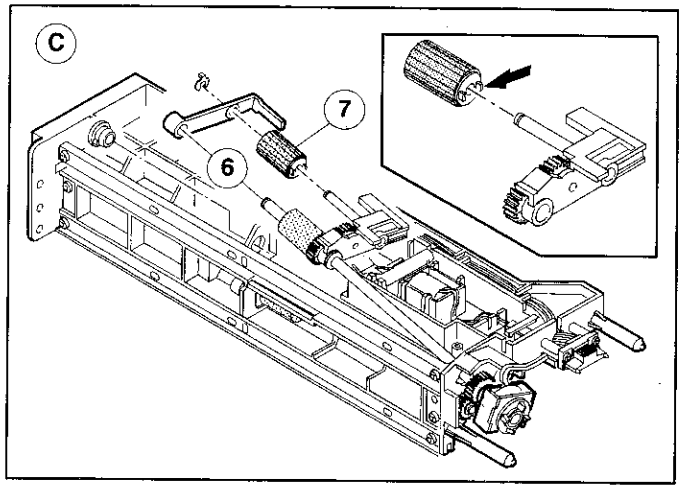
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4. Transport baseplate unit

Suction unit transfer belt | **Paper stop roller** | **Paper stop clutch**

① Remove the transport baseplate from the machine (4 screw on front, 2 on rear, 2 connectors).

② Pull the paper entry side rolle towards the paper exit side, then remove it.

③ Move the suction transfer belt to the front side, then remove it.

NOTE: Note the arrowhead that shown on the suction unit transfer belt.

④ Remove the DV guide (6 screws).

⑤ Remove the spring and the auxiliary roller.

⑥ Remove the paper stop clutch (1 screw, and loosen 1 setscrew).

⑦ Remove the front side gearwheel (one each of E-ring, pin, washer, spring).

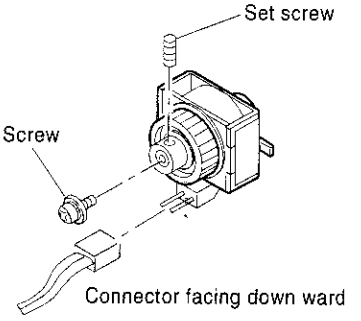
⑧ Remove the bearing (one each on front and rear).

⑨ Remove the paper stop roller.

⑩ Remove the connecting plate ⑤ in Fig. Ⓕ. (2 screws)

⑪ Remove the stopper and the 22T gear.

⑫ Remove the P.S clutch



NOTE: H specificafions mode remove the demoisture heater lamp in the suction section.
(Remove heater connector ⓑ in Fig. Ⓑ.)

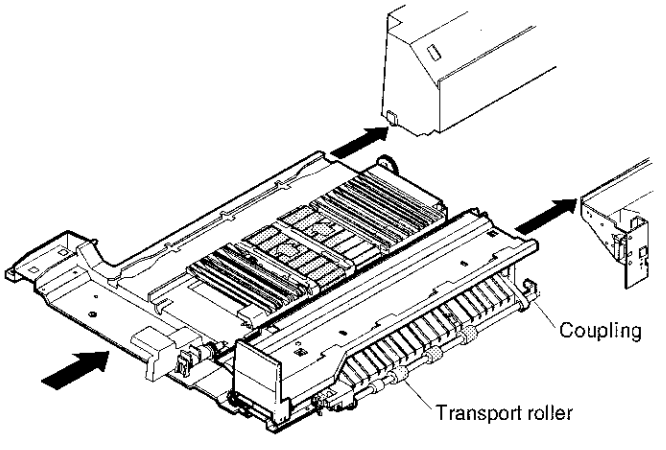
Suction lift lever

Loosen screw ⓐ in Fig. Ⓐ and shift the suction lift lever to R side, and the heater unit can be removed.

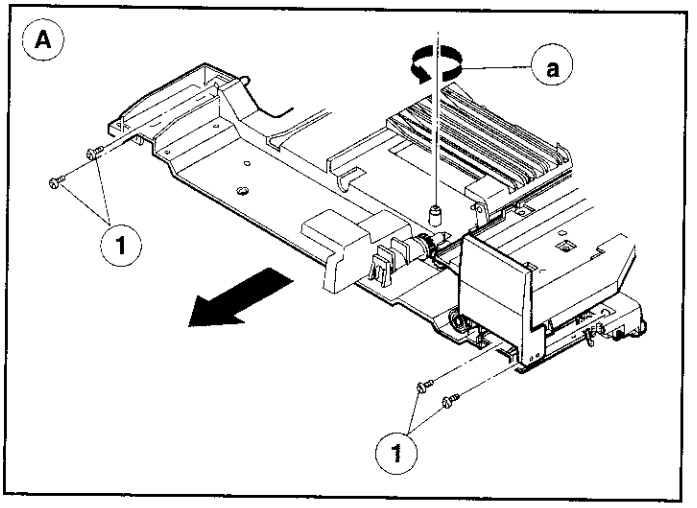
※ When removing the transport plate unit, remove the DV tank, the front cabinet, the process unit, and the upper cassette (ADU unit) in advance.
Before removing the upper cassette, it is advisable to remove the paper feed unit in advance.
Since the fuser unit will serve as the guide rail for removing and assembling the transport base plate, do not remove it.
Open the right cabinet.

※ When installing the transport base plate unit

① Fit the arrow mark in the DV guide with the groove in the left side of the rail transport base plate in the multi paper feed section of the main body and the mark in the fusing unit cover.



② Securely engage the transport roller coupling with the main body coupling. If not, the unit cannot be inserted fully.
Check that the roller can be turned manually. (If the couplings are not securely engaged, the roller cannot be turned manually.)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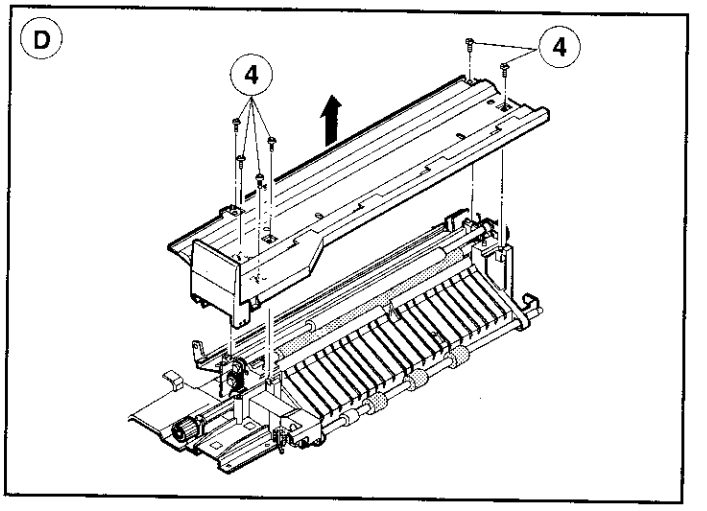
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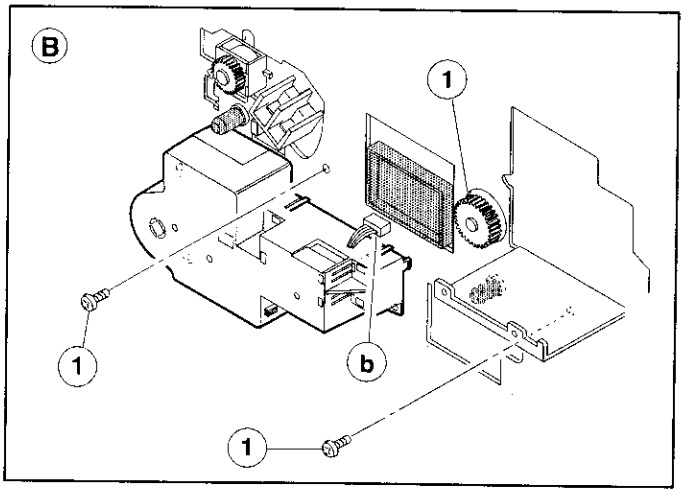
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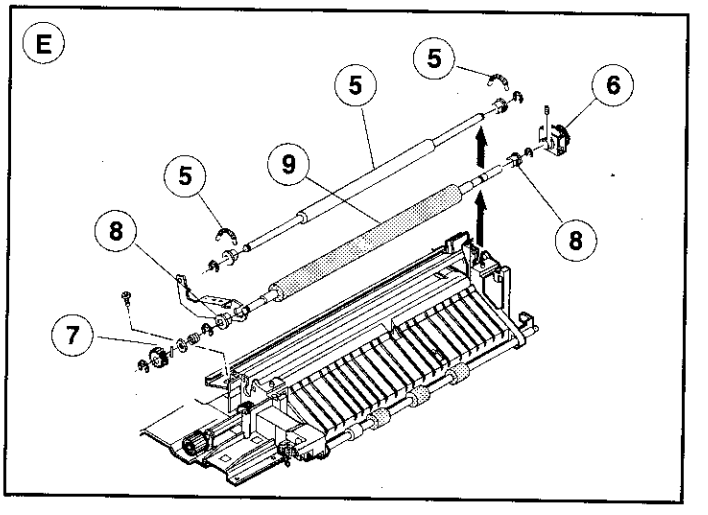
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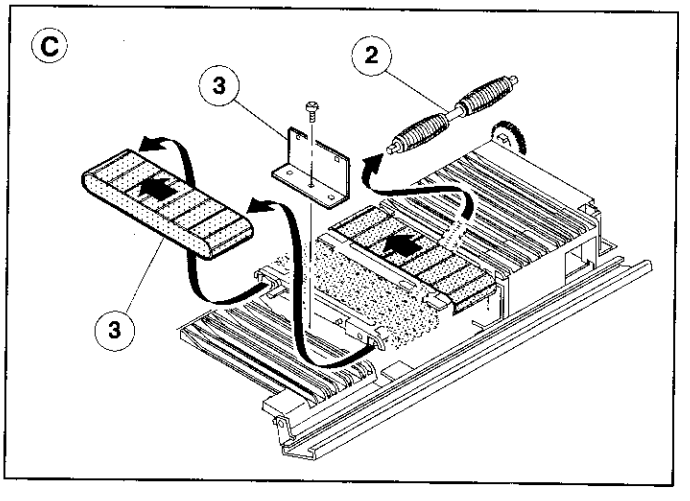
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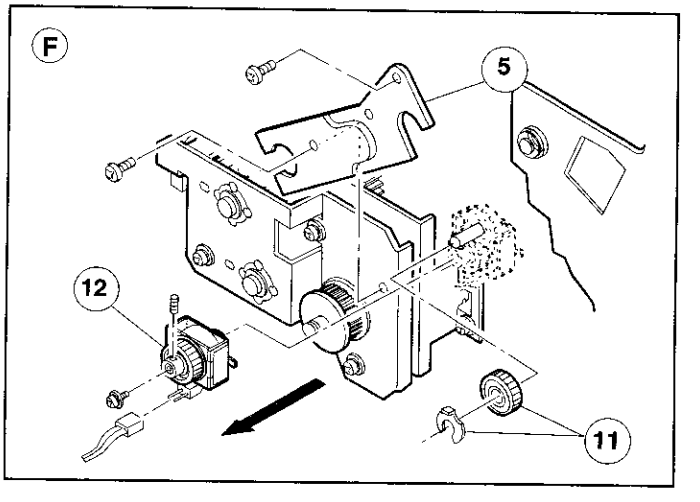
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5. Fuser unit

Heater lamp | **Upper/lower heat roller** | **Upper/lower separation pawls** | **Cleaning roller**

① Remove the fuser cover (2 screws).

② Unfasten the heater lamp connectors on both sides.

③ Unfasten the thermistor and thermostat connectors.

④ Remove the lamp holder unit (2 screws).

⑤ Remove the heater lamp.

⑭ Remove the cleaning roller springs on the front and the rear sides.

⑮ Remove the upper cleaning roller

⑥ Remove the tension spring and release the fuser tension.

⑦ Remove the clam shell mechanism holding screws (2 screws).

NOTE:
Do not use the spare screw hole.

NOTE: When the clam shell is assembled, the periphery of the mechanism must meet together. Ensure gear mesh is correct. Ensure clamshell is seated properly.

⑧ Open the fuser unit.

⑨ Remove the upper heat roller assy.

⑫ Remove the upper separation pawls.

Lower cleaning roller

⑯ Put the front/rear/under CL spring in the frame groove and release the pressure.

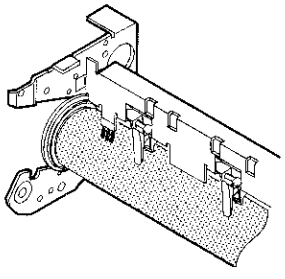
NOTE: When installing the lower heat roller, the pawls must be positioned away from the roller before closing the lower pawl holding plate, then restore pawls to proper position after installing roller.

⑩ Open the lower pawl holder bracket assy (2 screws).

⑪ Remove the lower heat roller assy.

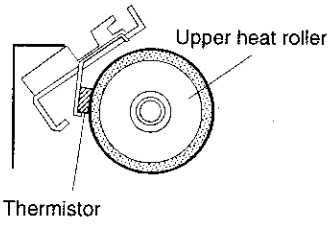
⑬ Remove the lower separation pawls.

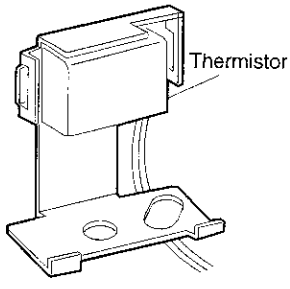
(Discharge brush)
The discharge brush must be vin contact with the upper heat roller.

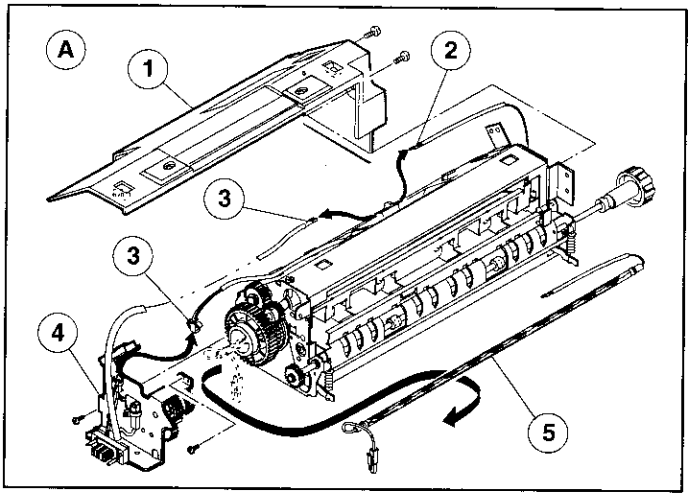


(Thermistor)

- The center of the thermistor must be in contact with the heat roller.
- Clean thermistor surface using alcohol.



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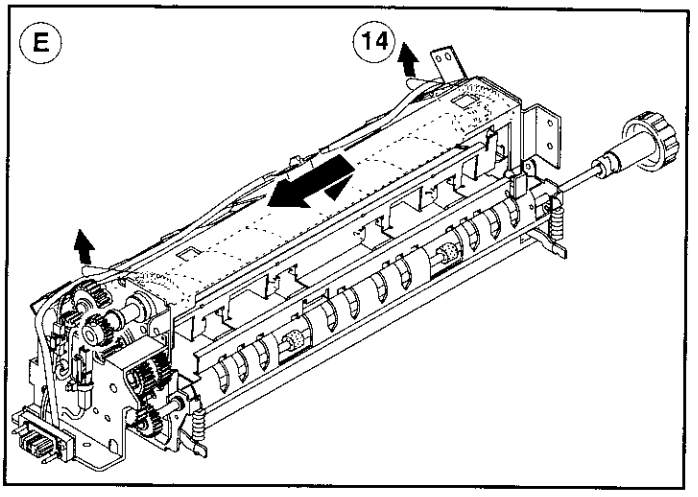
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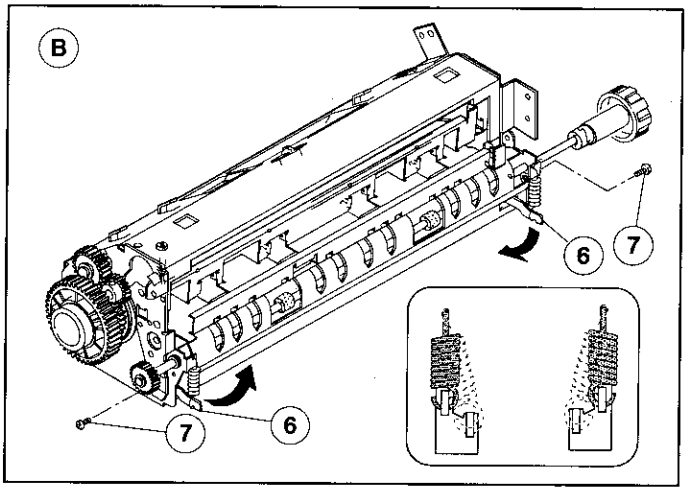
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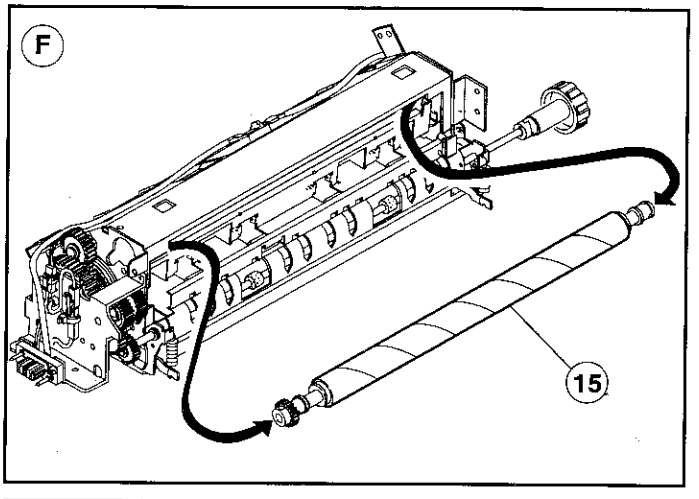
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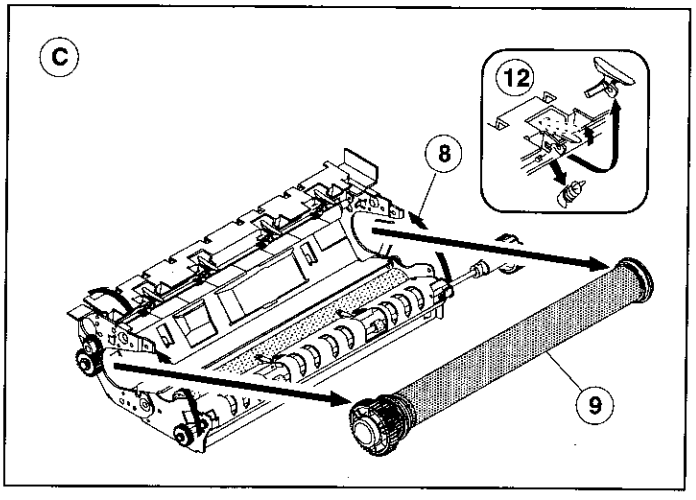
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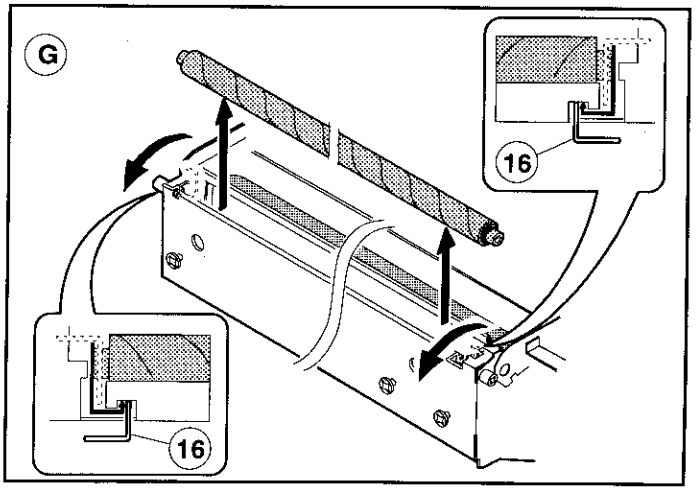
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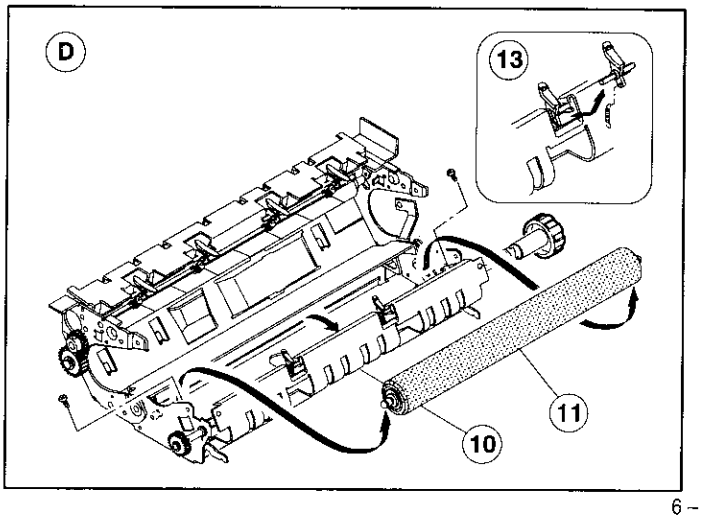
D
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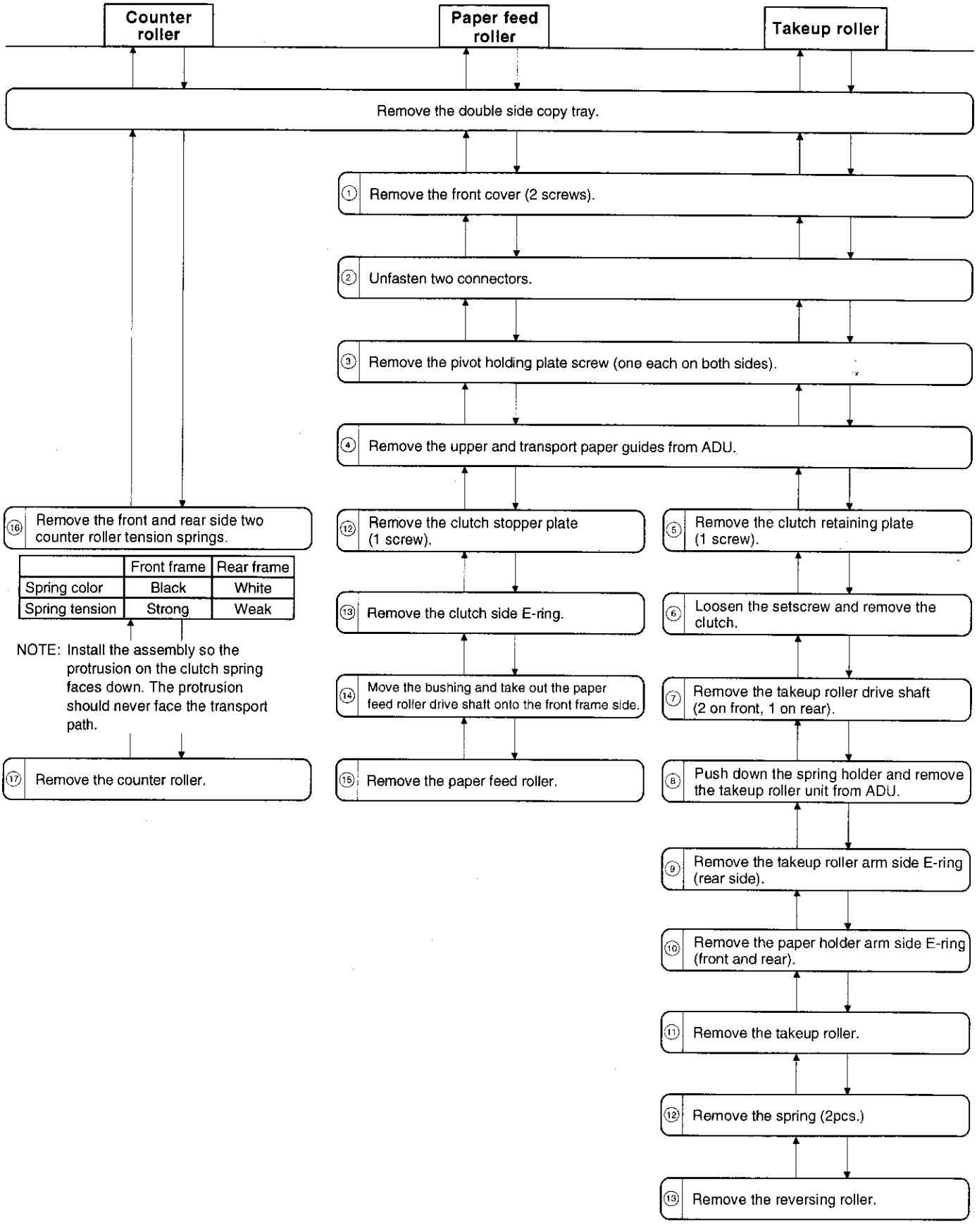
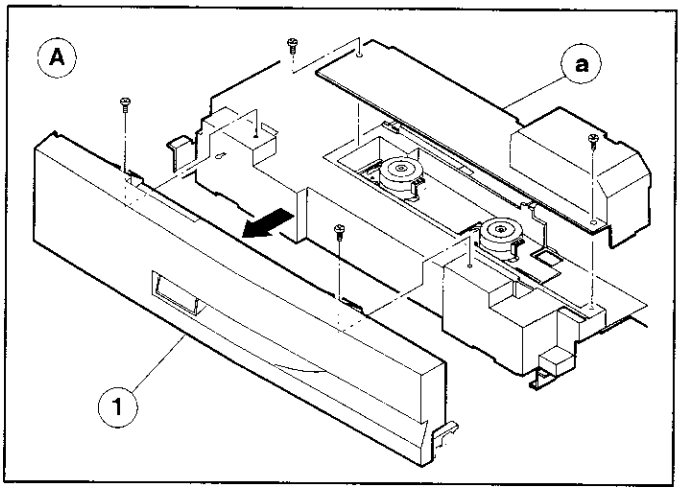
6. Duplex copy unit


Counter roller
Paper feed roller
Takeup roller
Remove the double side copy tray.
① Remove the front cover (2 screws).
② Unfasten two connectors.
③ Remove the pivot holding plate screw (one each on both sides).
④ Remove the upper and transport paper guides from ADU.
⑤ Remove the clutch retaining plate (1 screw).
⑥ Loosen the setscrew and remove the clutch.
⑦ Remove the takeup roller drive shaft (2 on front, 1 on rear).
⑧ Push down the spring holder and remove the takeup roller unit from ADU.
⑨ Remove the takeup roller arm side E-ring (rear side).
⑩ Remove the paper holder arm side E-ring (front and rear).
⑪ Remove the takeup roller.
⑫ Remove the spring (2pcs.)
⑬ Remove the reversing roller.
⑫ Remove the clutch stopper plate (1 screw).
⑬ Remove the clutch side E-ring.
⑭ Move the bushing and take out the paper feed roller drive shaft onto the front frame side.
⑮ Remove the paper feed roller.
⑯ Remove the front and rear side two counter roller tension springs.
Front frame
Rear frame
Spring color
Black
White
Spring tension
Strong
Weak
NOTE: Install the assembly so the protrusion on the clutch spring faces down. The protrusion should never face the transport path.
⑰ Remove the counter roller.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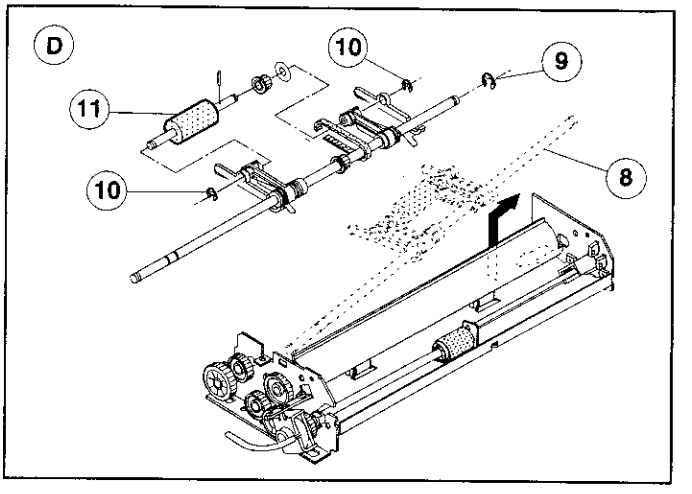
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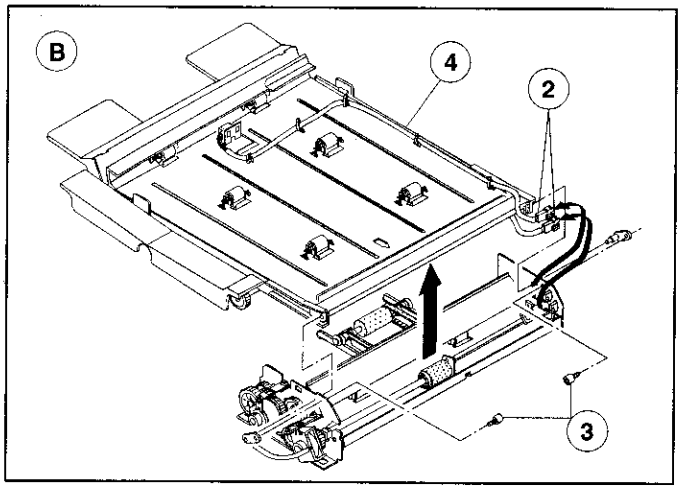
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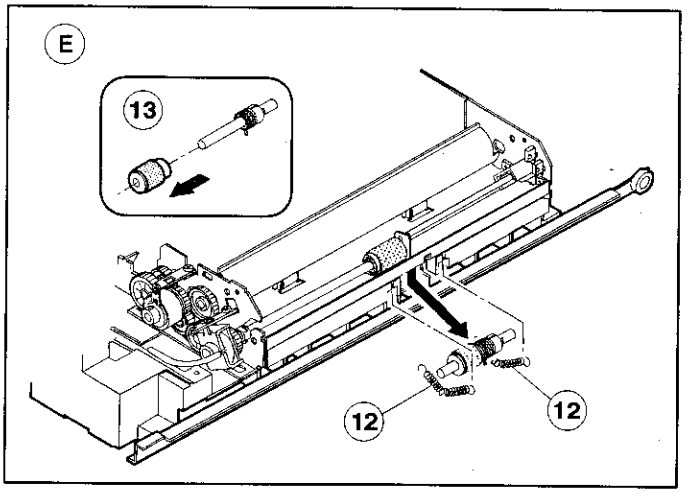
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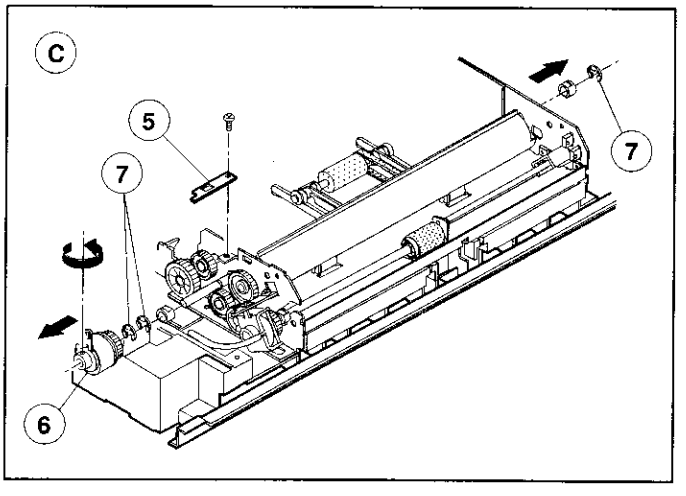
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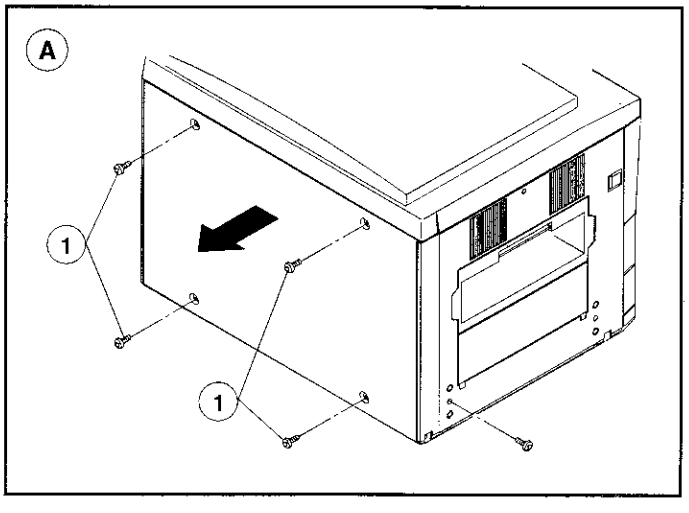
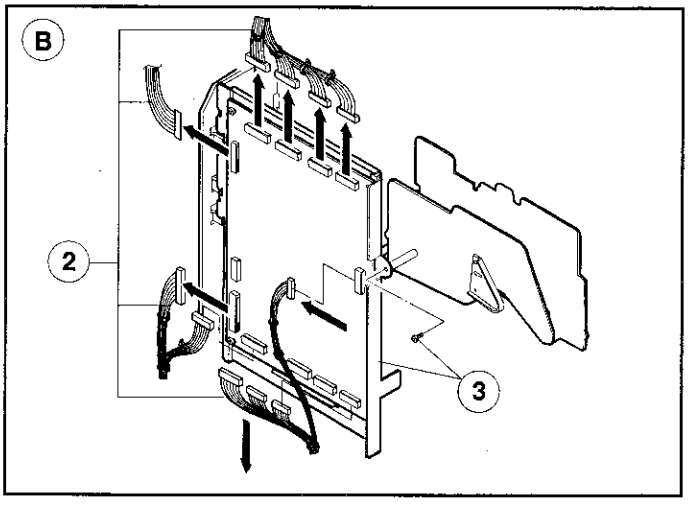
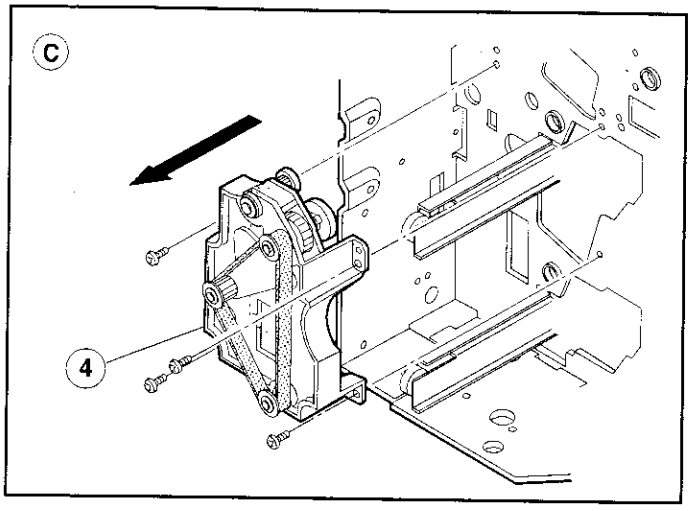
7. Rear frame side major components

Paper feed drive unit | **Variable paper speed unit** | **Main drive unit (belt)**

1. Remove the rear panel (4 screws).
2. Remove the main PWB connectors (13 connectors).
3. Remove the main PWB unit from the copier (1 screw).
4. Remove the paper feed drive unit (4 screws).
5. Remove the joint plate (2 screws).
6. Remove the main drive side pulley holding E-ring, then remove the drive belt.
7. Remove the variable paper feed speed unit (4 screws).
8. Remove the variable speed clutch unit.
9. Unfasten the high voltage unit connectors (6 connectors), and remove the ground harness from the copier chassis (1 screw each).
10. Remove the high voltage PWB from the suction duct unit.
11. Remove the suction unit (6 screws).



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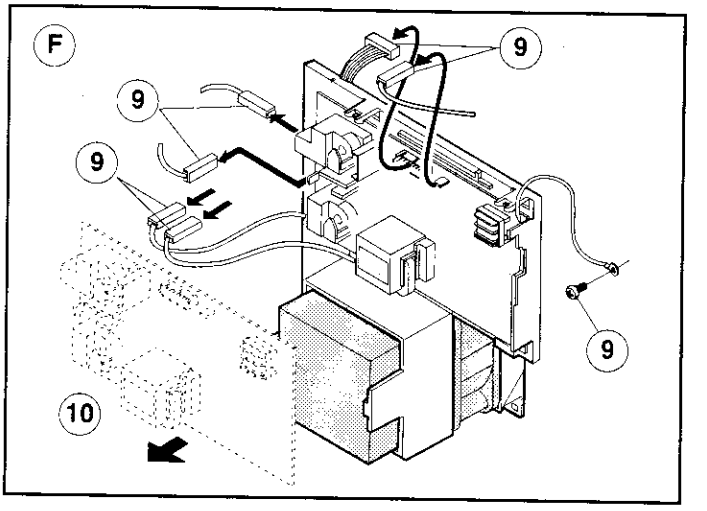
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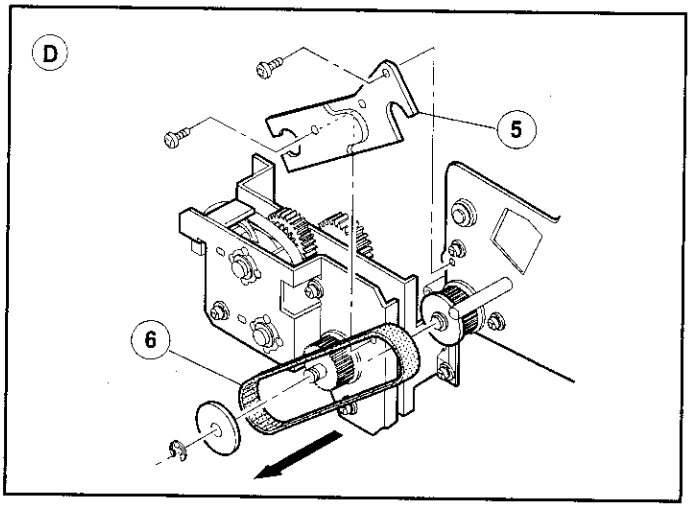
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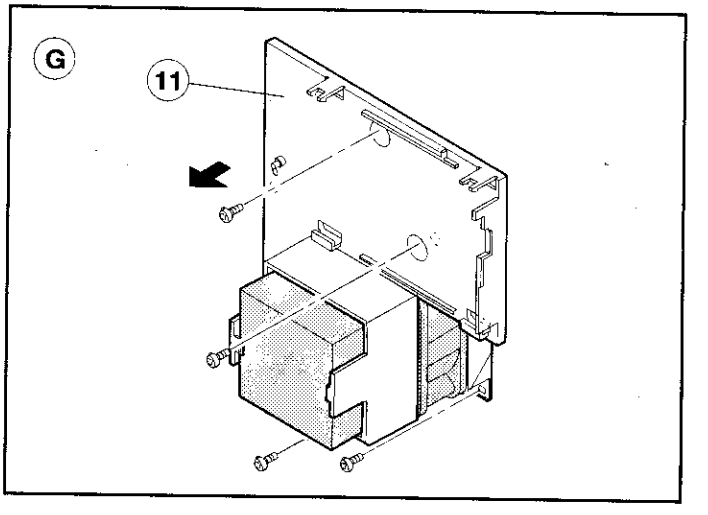
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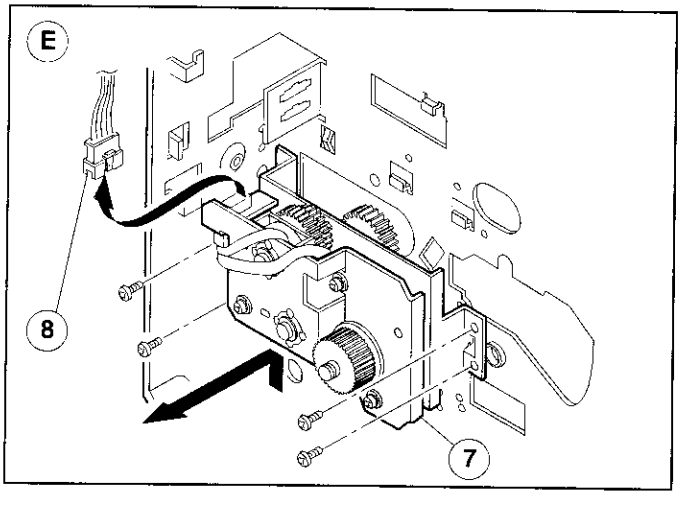
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AC power supply PWB | **DC power supply PWB** | **Paper exit gate solenoid**

① Remove the rear panel of the copier (4 screws).

② Remove the rear side screw of the left side panel (1 screw).

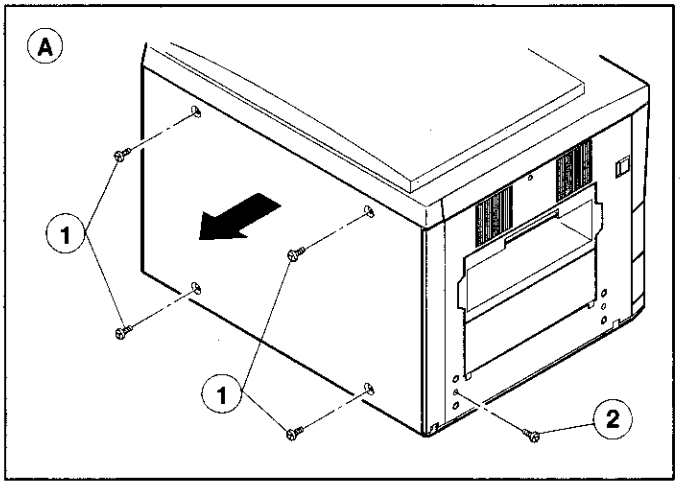
③ Remove the AC power supply board (5 screws, 6 connectors).

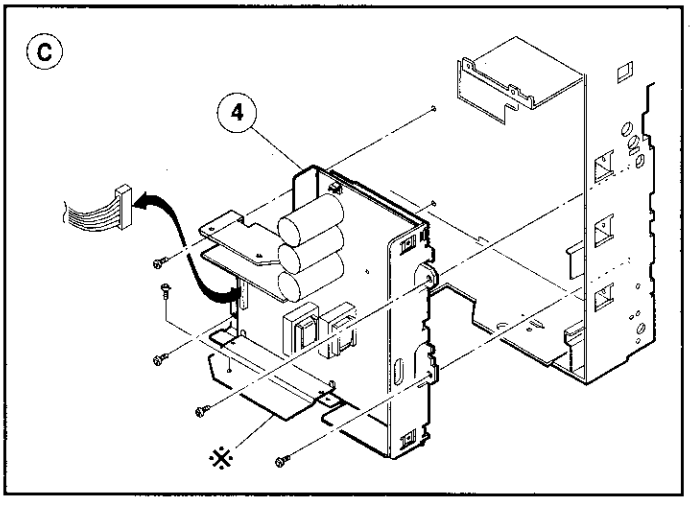
④ Remove the DC power supply PWB (5 screws, 1 connector).

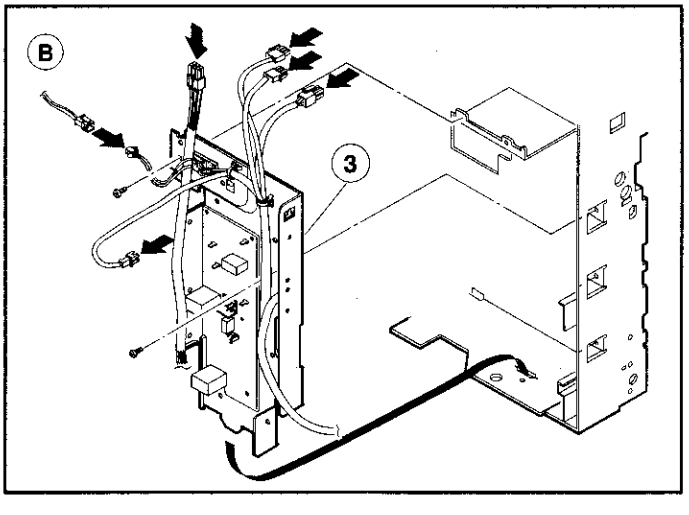
※ DC power PWB identification

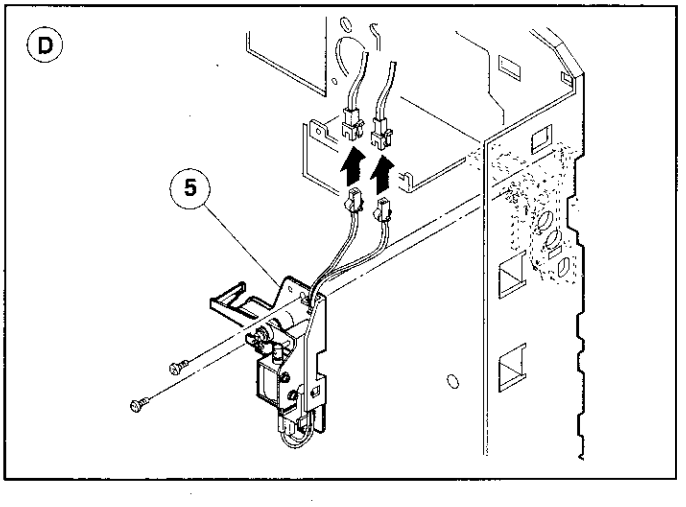
100V system	200V system
White label	Red label

⑤ Remove the paper exit gate solenoid (2 screws, 2 connectors).

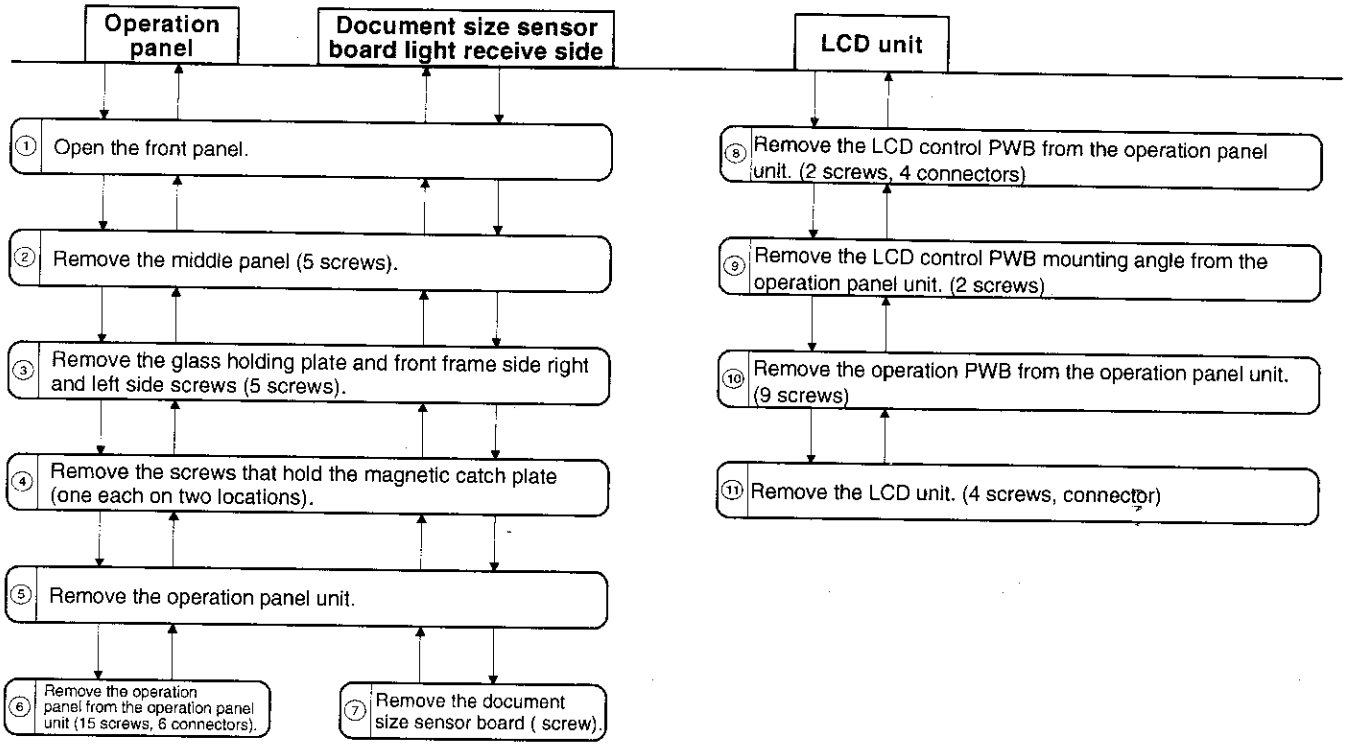


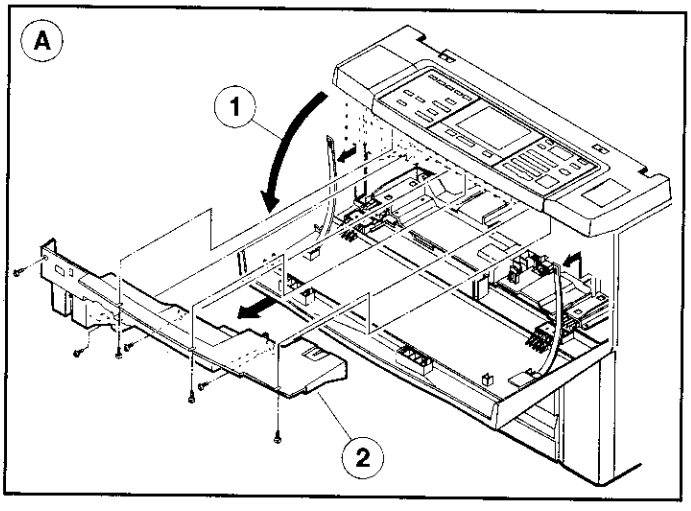


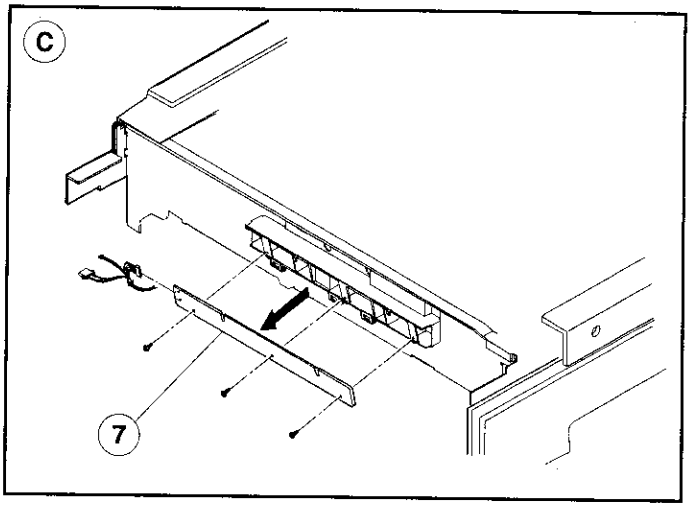


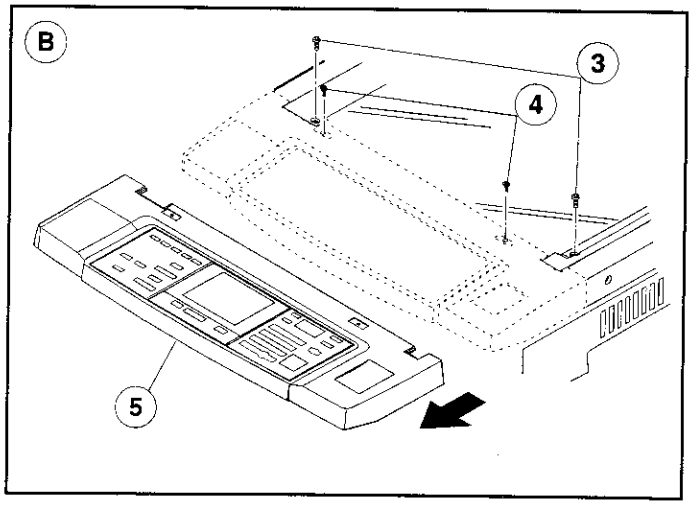


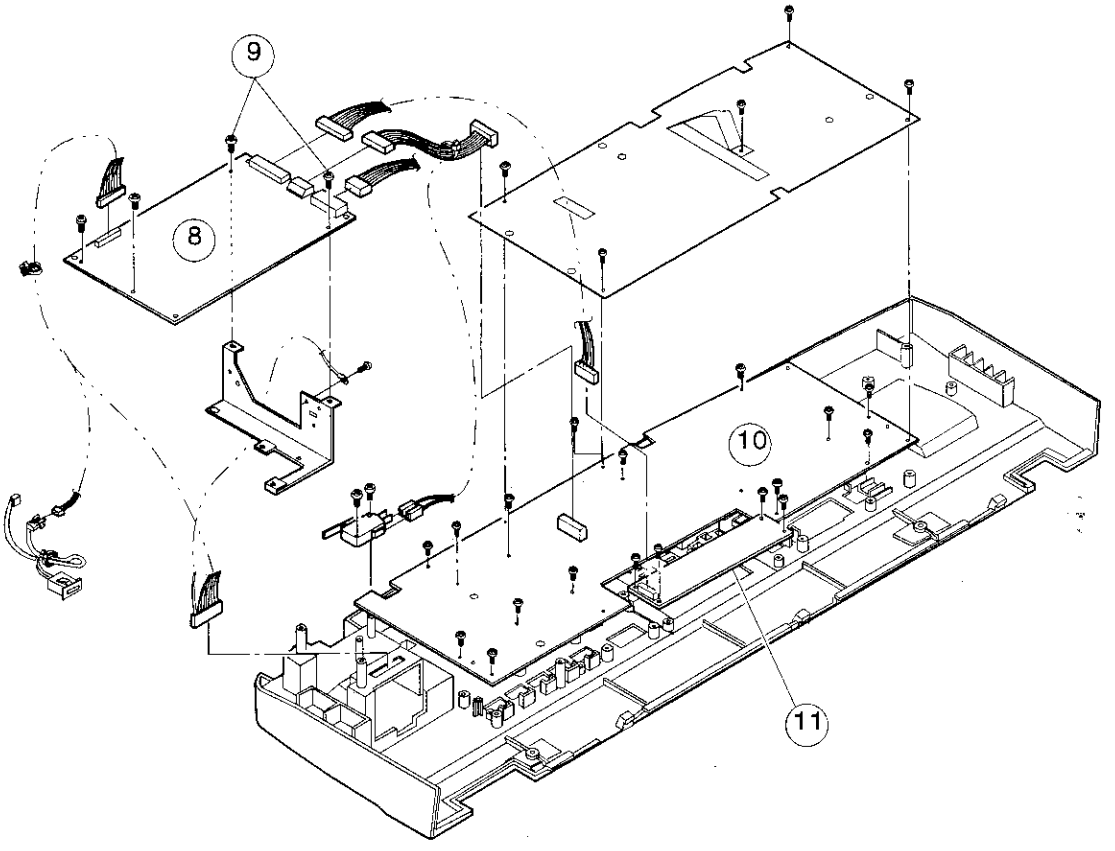
8. Operation panel unit and document size sensor board (light receive side)


Operation panel
Document size sensor board light receive side
LCD unit
① Open the front panel.
② Remove the middle panel (5 screws).
③ Remove the glass holding plate and front frame side right and left side screws (5 screws).
④ Remove the screws that hold the magnetic catch plate (one each on two locations).
⑤ Remove the operation panel unit.
⑥ Remove the operation panel from the operation panel unit (15 screws, 6 connectors).
⑦ Remove the document size sensor board (screw).
⑧ Remove the LCD control PWB from the operation panel unit. (2 screws, 4 connectors)
⑨ Remove the LCD control PWB mounting angle from the operation panel unit. (2 screws)
⑩ Remove the operation PWB from the operation panel unit. (9 screws)
⑪ Remove the LCD unit. (4 screws, connector)





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9. Optical unit

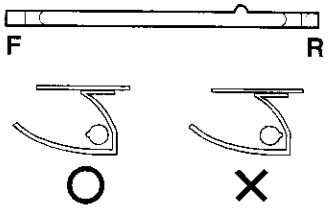
Copy lamp | **Copy lamp unit** | **#2/3 mirror base unit** | **#4/5 mirror base unit**

① Remove the original guides (L, R) and remove the table glass (two each screws).

② Move the copy lamp unit to the cut in the rear of the top cabinet and remove the rear frame side copy lamp electrode holding screw.

③ Remove the copy lamp.

NOTE: Note the direction of the copy lamp.



It must be installed with the bulge of the copy lamp near the rear side, as shown in the figure.

④ Remove the operation panel.
Remove the top cabinet, left.
Remove the left cabinet.

⑤ Remove the upper dark box cover (2 screw).

⑥ Remove the wire holding plates found on both frame sides of the copy lamp unit, then remove wires from the side plates (F, R).

⑦ Rotate the copy lamp unit to remove.

⑧ Remove the mirror base wire from the #2/3 mirror base unit.

⑨ Move the #2/3 mirror base unit to the square hole (a) on the front side of the optical baseplate, then rotate it to remove.

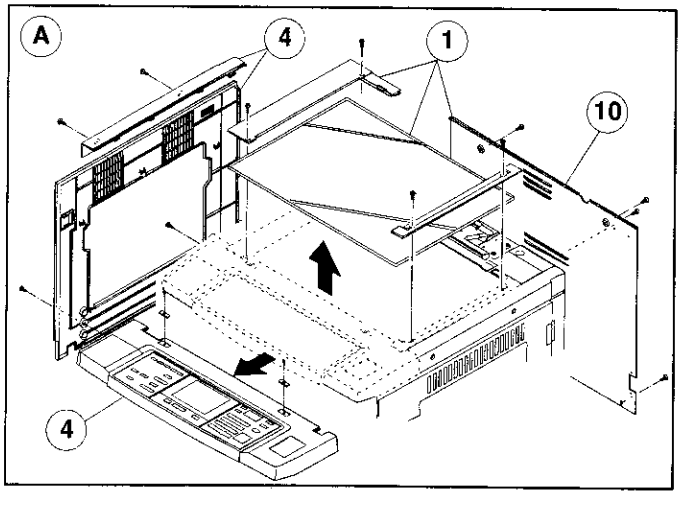
⑩ Remove the rear panel (6 screw).

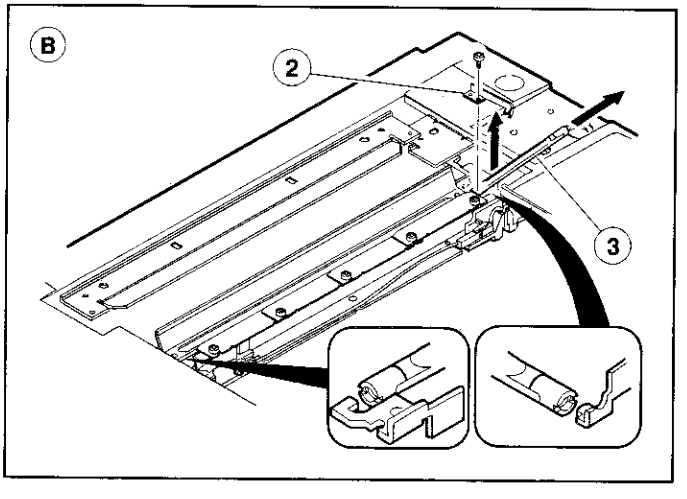
⑪ Record value for assembly.

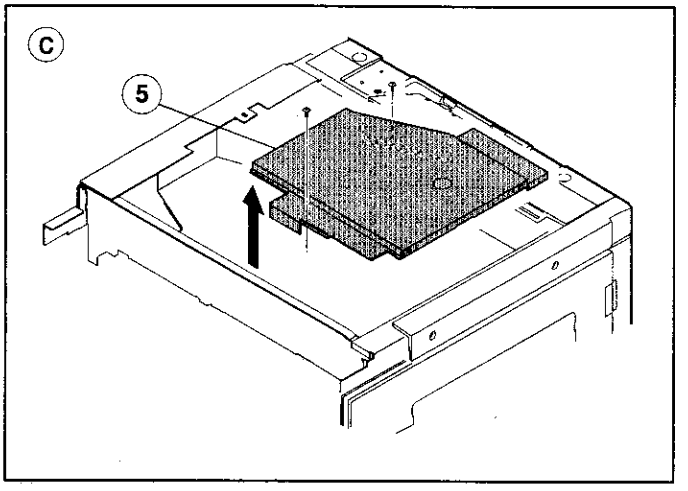
⑫ Remove the #4/5 mirror motor holding bracket (6 screw).

⑬ Remove the optical harness connectors.
Remove the lens motor connectors.
Remove the lens home position sensor connector.
Unfasten the document sensor light receive board connector. Remove the front cabinet switch junction harness.

⑭ Remove the mirror base unit together with the #4/5 mirror motor holding bracket assy.



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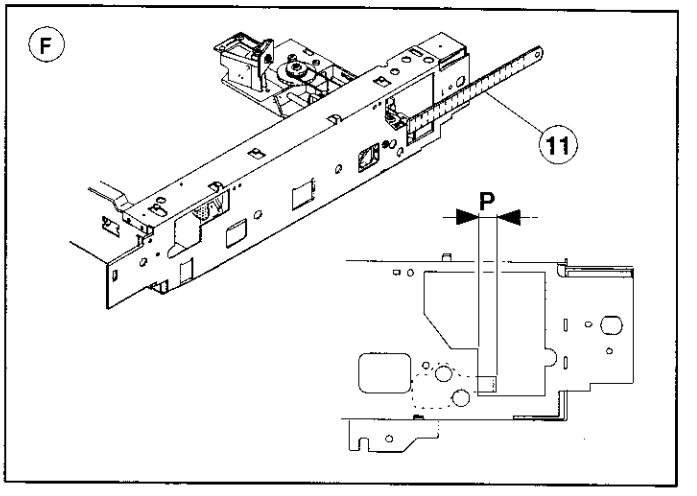
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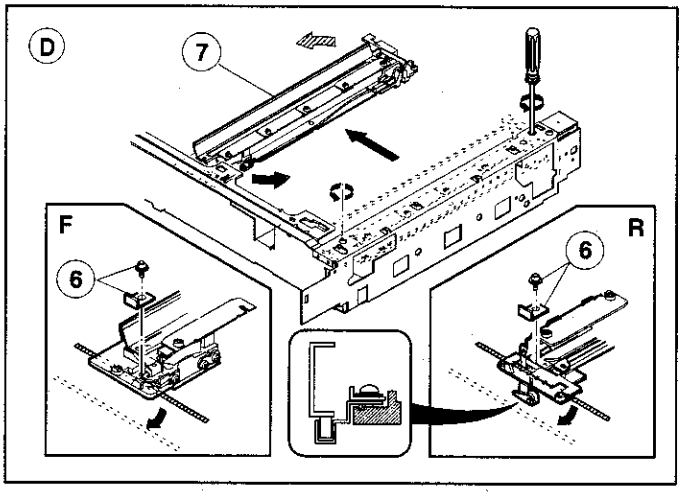
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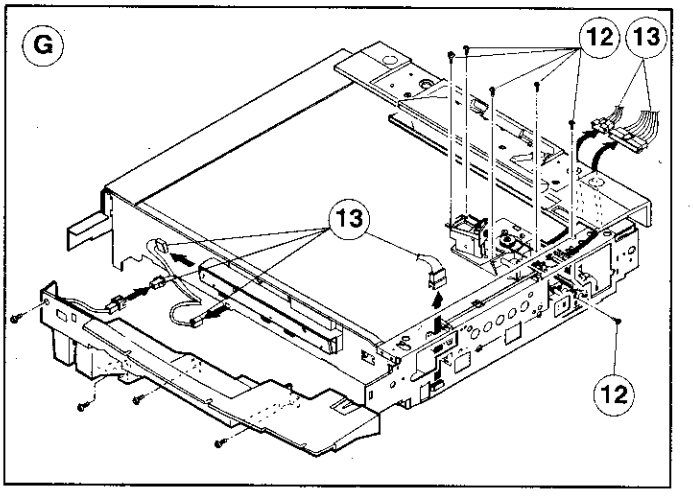
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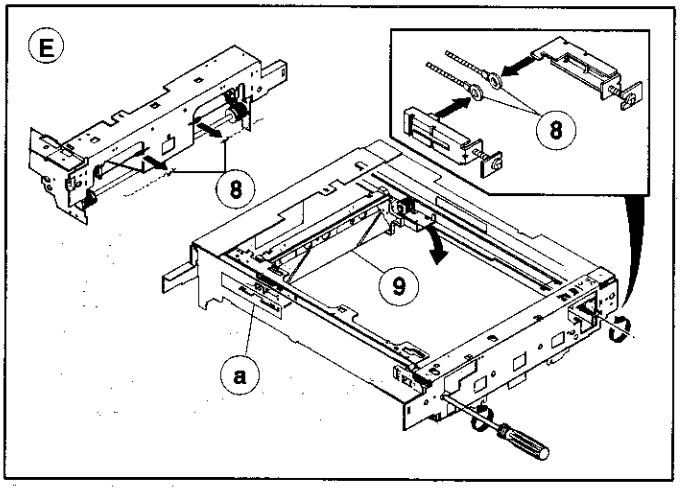
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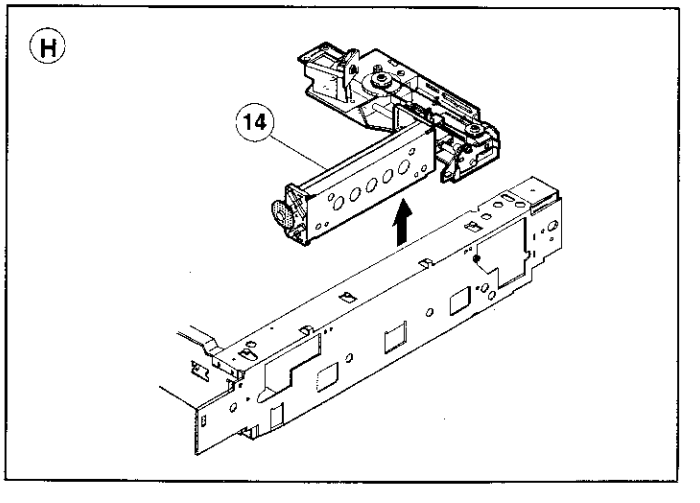

H
14

Mirror base wire stretching

(Preliminary checks)

Check the stop position of the wire winding pulley.

Visually check that the wire grooves of the front/rear wire winding pulleys are at the same level.

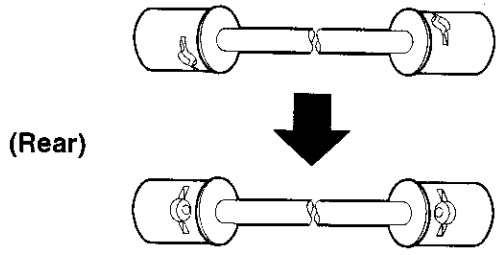
If there is a substantial discrepancy between the two, loosen the two setscrews which are fixing the pulleys and adjust the pulley positions. After adjustment, tighten the setscrews.

① Hang the mirror base wire fixing fixture on the tension adjustment plate hook.

② Fit mirror base B onto the mirror base positioning plates (front/rear). Pass the mirror base wire along the outer groove of the mirror base B pulley.

③ Pass the mirror base wire along the pulley groove in the paper feed side.

④ Pass the mirror base wire under mirror base B and wind it around the winding pulley.
At that time, fix the wire groove section in the winding pulley to the upper position, wind the mirror base wire 9 times, and put the 8th winding in the groove.



The first winding position should be 9 - 10mm toward the body frame from the pulley groove section.

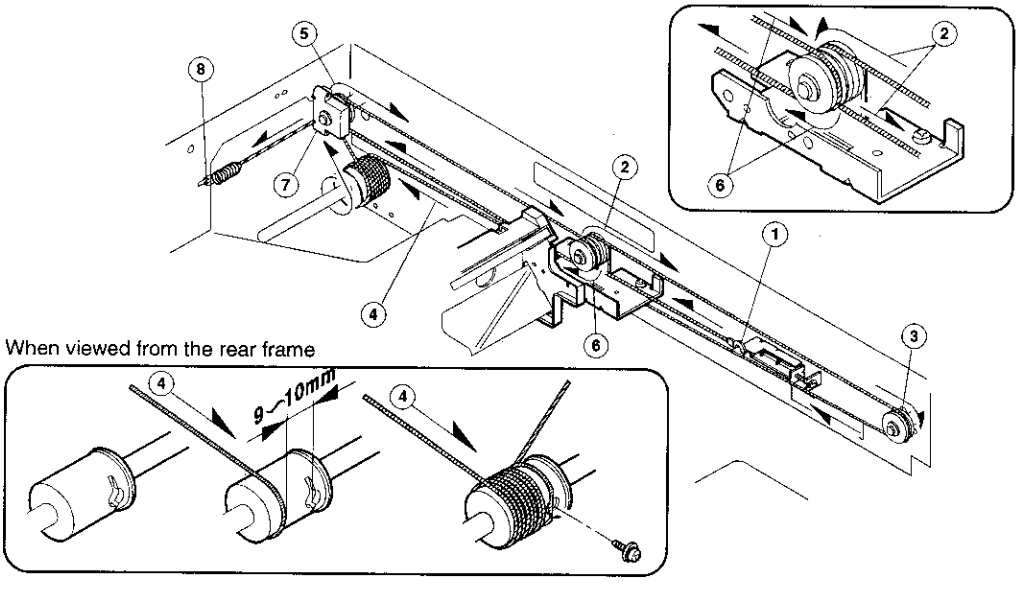
⑤ Pass the mirror base wire along the pulley groove in the paper exit side.

⑥ Pass the mirror base wire along the internal groove of the mirror base B pulley.

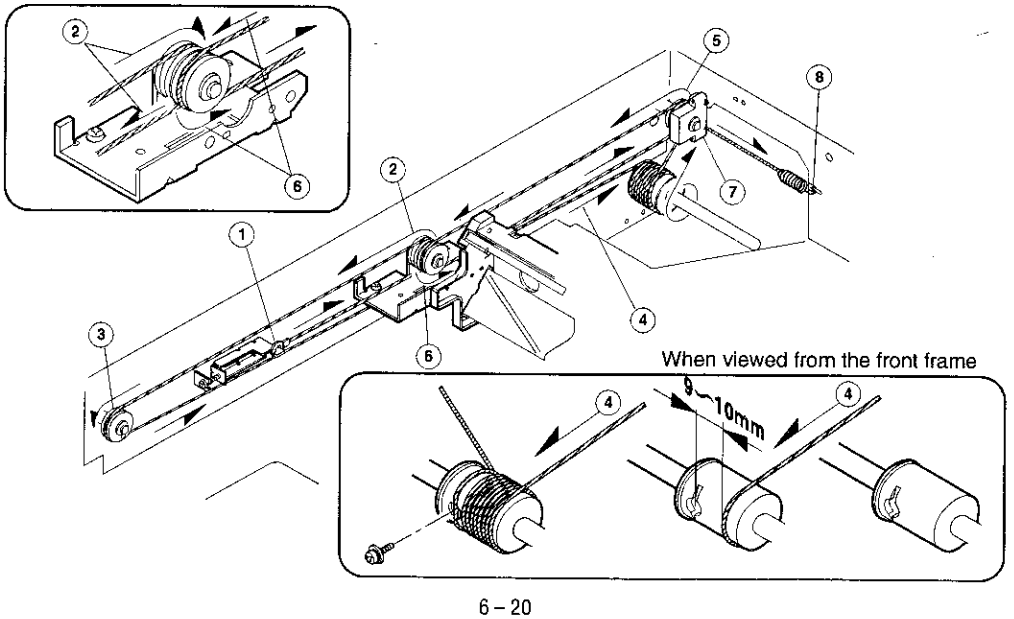
⑦ Pass the mirror base wire through the wire guide.

⑧ Attach the mirror base wire tension spring to the long hole in the optical base plate.

(Rear frame side)



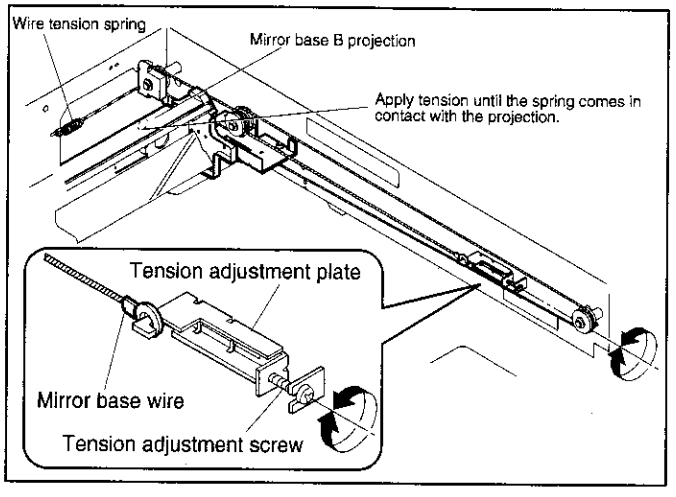
(Front frame side)



Mirror base wire tension adjustment

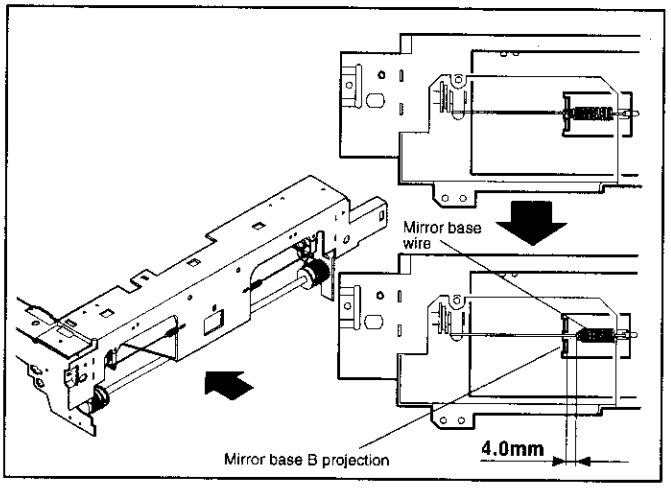
① Manually turn the mirror base drive pulley to shift mirror base B which is at the mirror base positioning plate 20 to 30mm to the paper exit side.

② Turn the mirror base wire tension adjustment screw clockwise to apply tension to the wire until the wire tension spring edge makes contact with the projection of mirror base B.


Wire tension spring
Mirror base B projection
Apply tension until the spring comes in contact with the projection.
Tension adjustment plate
Mirror base wire
Tension adjustment screw

③ Manually turn the mirror base pulley to make mirror base B perform full scan a few times, and check that the mirror base wire spring edge is in contact with the projection of mirror base B. If they are not in contact with each other, adjust by turning the tension adjustment screw again. In this case, check also that there is no slack in the wire on the mirror base pulley.

④ Turn the mirror base wire tension adjustment screw 6 turns counterclockwise. (Then the distance between the mirror base wire spring and the projection of mirror base B will be about 4mm.)

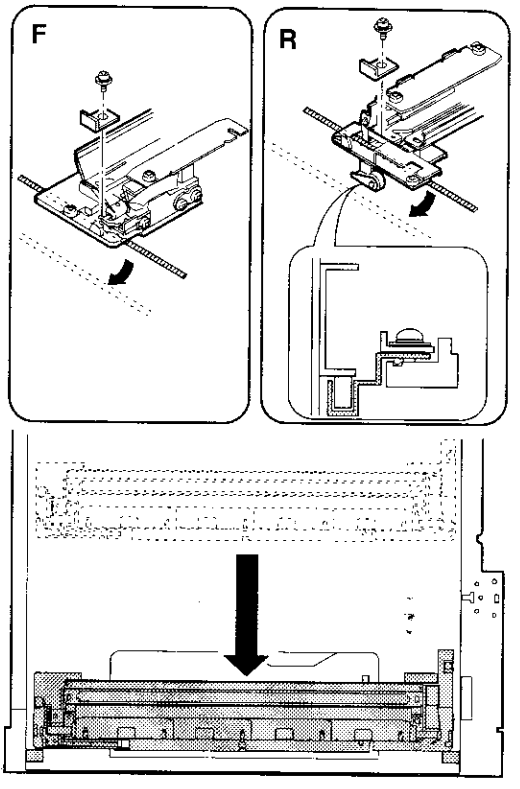


(Perform the same procedures for the front frame side and the rear frame side.)

Copy lamp unit installing position

① Pass the front/rear mirror base drive wire between the copy lamp unit frame and the wire fixing plate.
In this case, do not tighten the wire fixing screw.

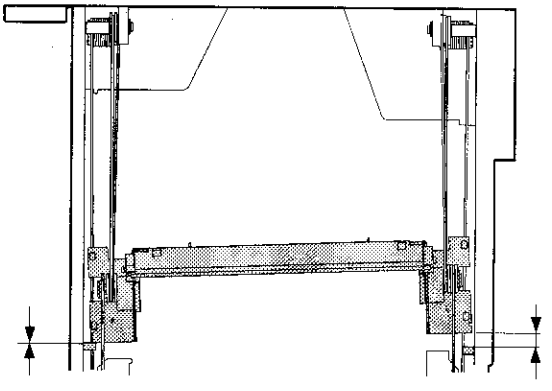
② Press the copy lamp unit onto the positioning plate and tighten the wire fixing plate.

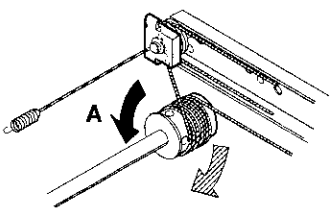


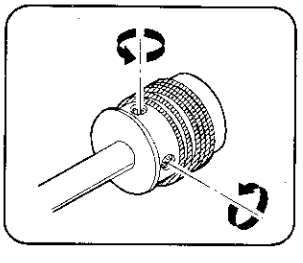
No. 2/3 mirror base unit installing position

This adjustment is to adjust parallelism of the mirror base B to the drum surface and the original surface.

① Manually turn the mirror base drive pulley to bring mirror base B into contact with the mirror base positioning plate. In this case, when the front frame side and the rear frame side of mirror base B are simultaneously brought into contact with the mirror base positioning plate, the parallelism of mirror base B is proper and there is no need for adjustment.





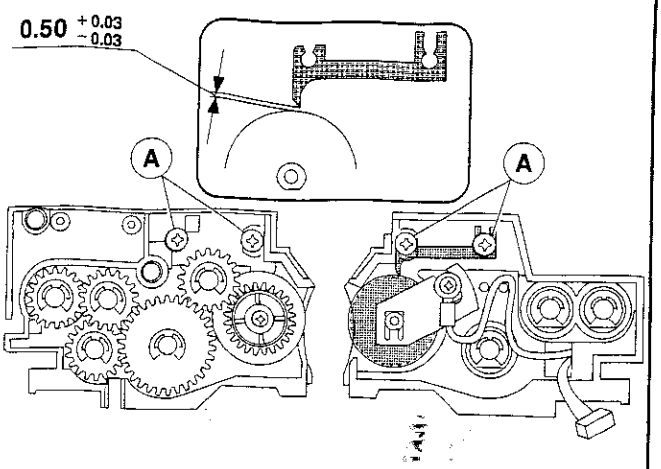


[7] ADJUSTMENTS

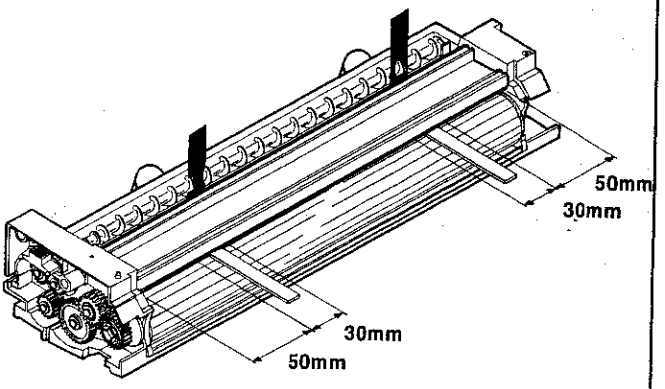
1. Developing Unit

(1) Clearance Adjustment of Developing Doctor Blade

Tool: UKOGM0075CSZZ (Feeler gauge)

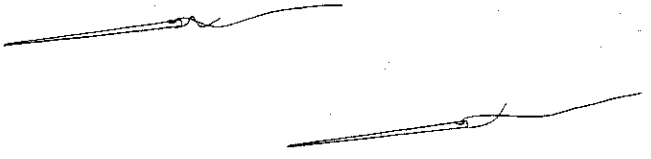


① Remove the 5 screws and the 5-pin connector which connect the developer tank to the toner hopper, and pull out the developer tank.
② Loosen 4 setscrews A of the developing doctor blade.
(2 setscrews on the rear frame side and 2 on the front frame side).
③ Insert the feeler gauges into the clearance between the developing doctor blade and the magnet roller at the points 50-80 mm away from both ends.

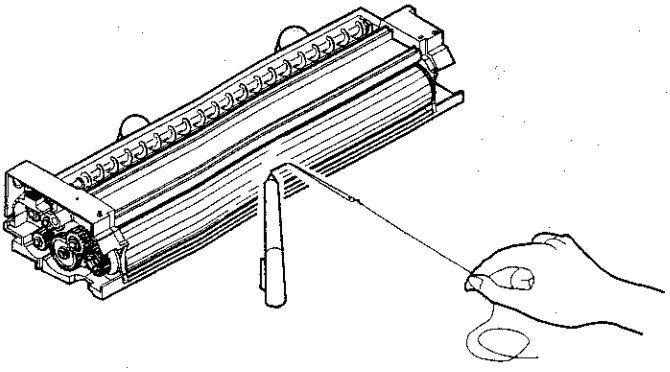


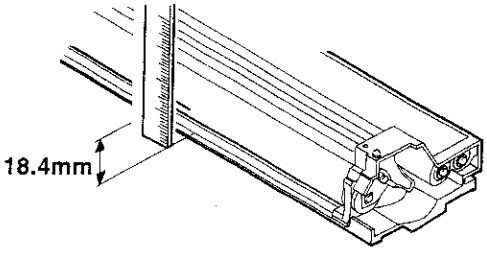
④ While pressing down the developing doctor blade in the arrow direction, tighten the 4 setscrews to secure the developing doctor blade.
⑤ Check that the clearance between the developing doctor blade and the magnet roller is 0.50±0.03 mm at the points 50-80 mm away from the doctor blade ends.
Caution: Do not damage the developing doctor blade or the magnet roller during insertion of the feeler gauge.

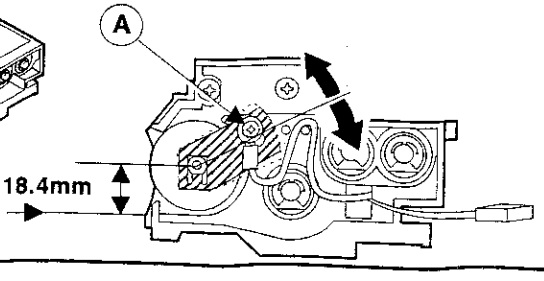
(2) Position Adjustment of Developing Magnet Roller Main Pole



① Remove the 5 screws and the 5-pin connector which connect the developer tank to the toner hopper and remove the toner hopper. Put developing unit on a flat surface.
② Thread a needle or pin as shown in the figure on the right.
③ While holding the thread, bring the needle near the magnet roller. (Do not use a clip because it will not provide an accurate position of the main pole).
④ Use a pen to put a mark on the point of the magnet roller surface to which the needle is attracted.
⑤ Measure the distance from the mark to the reference plane on which the developer tank is placed.
This distance must be 18.4 mm.
If not so, loosen setscrew A of the main pole adjusting plate and move the adjusting plate in the arrow direction to obtain the proper distance.





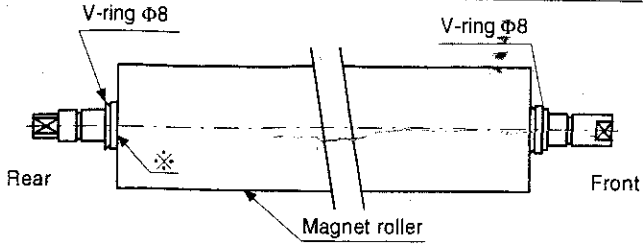


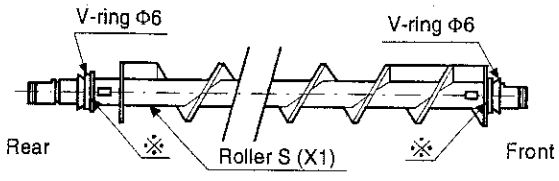
(3) Developing Bias Adjustment

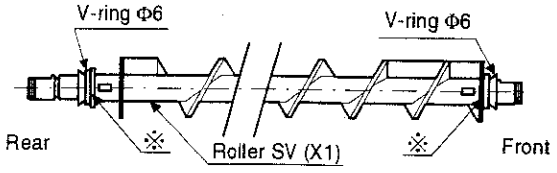
① Set the measuring range of the digital multimeter to 300 Vdc or more.
② Apply the probes to the developing bias output check pin (BSCP) and the chassis(GND) of the high voltage unit.
③ Perform Simulation 8-1. (The developing bias voltage is output for 30 seconds.
④ Adjust VR301 for developing bias control so that the output voltage is −215±5V.

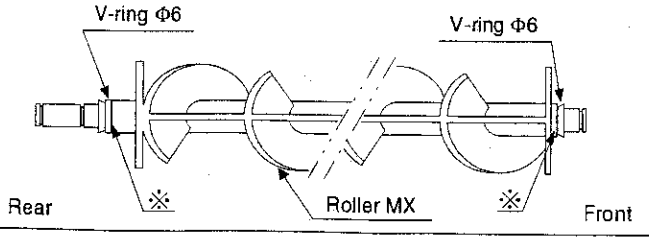
(4) Notes on installing various rollers of the developing unit

(1) V-rings must be attached in the correct direction.
(2) No gap must exist at ※ between the V-ring and the roller.
(3) When attaching ϕ8-ring PRNGP0013FCZZ, ϕ8-ring PRNGP0022FCZZ and ϕ6-ring PRNGP0015FCZZ to the developing magnet roller,
   1) the direction of the V-ring must be as shown in the upper figure.
   2) no gap must exist at ※ between the V-ring and the roller.



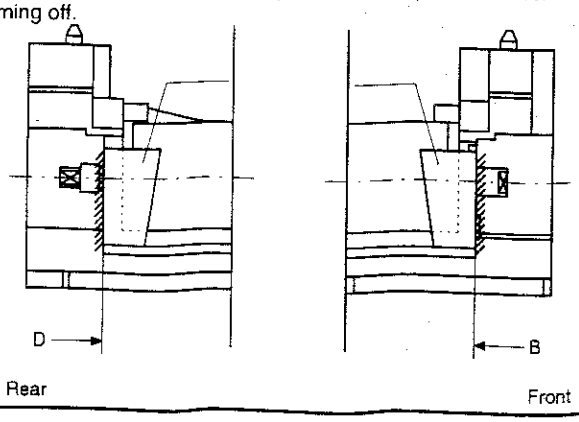


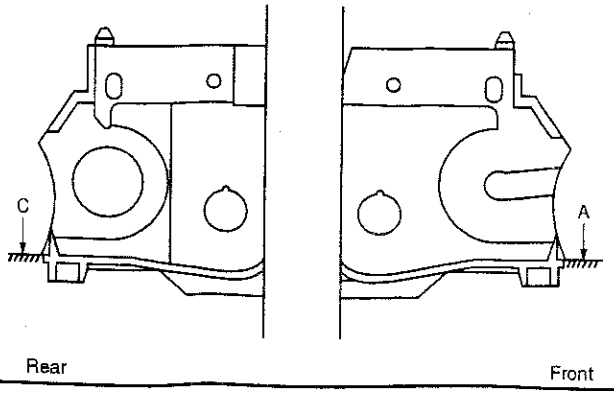




(5) Notes on applying the developing side seals (front and rear)

(1) The side seal must be applied on a surface which is free of oil, grease and foreign matter.
(2) The side seal must be securely attached to prevent it from coming off.

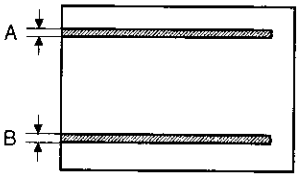




2. Processing Unit

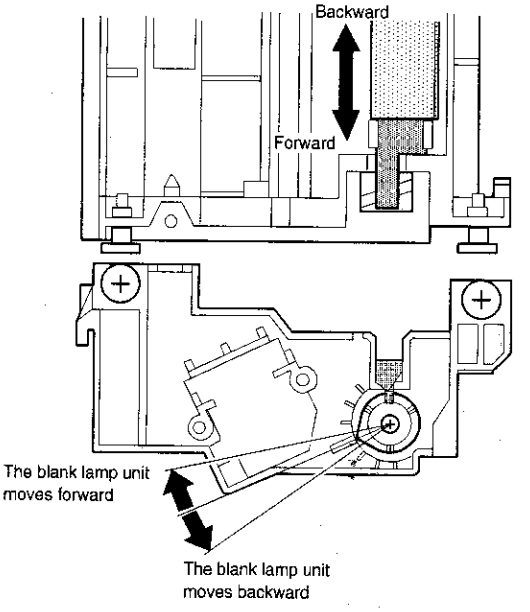
(1) Adjustment of Blank Lamp Position

① Check that the center deviation is 2.0mm or less. (If the center deviation is more than 2.0 mm, correct it).
② Set an A3(11x17)-size blank original on the original table, and with the original cover opened, make a reduced (x 0.64) copy using an A3 (11 x 17) paper.
③ Measure the width of solid areas. If the width is more than 1 mm, adjust the blank lamp unit position so that the width of the solid areas is 1 mm or less.



IA-BI ≦ 1mm

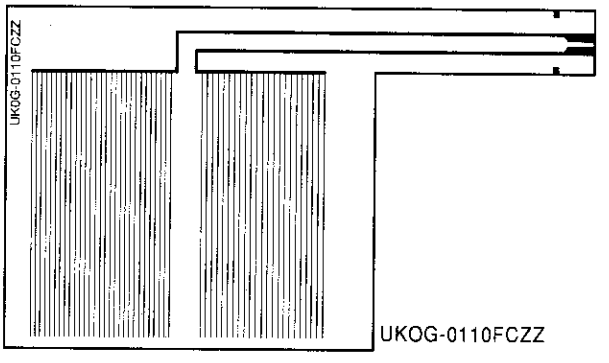
1 notch of the adjusting cam : lamp movement 0.5 mm
Half notch of the adjusting cam : lamp movement 0.25 mm



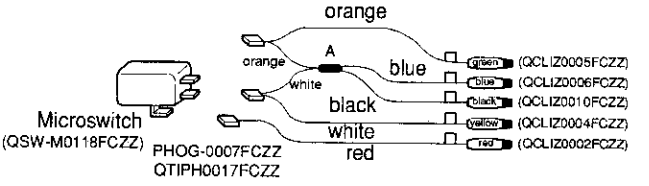
(2) Adjustment of High-Voltage Output Balance

A. Applying the Special Measuring Tool

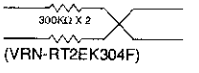
Electrode sheet (UKOG-0110FCZZ)



Electrode sheet harness (DHAI-0304FCZZ)



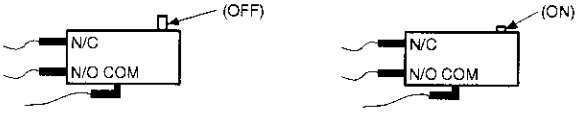
(Circuit diagram of A-portion)



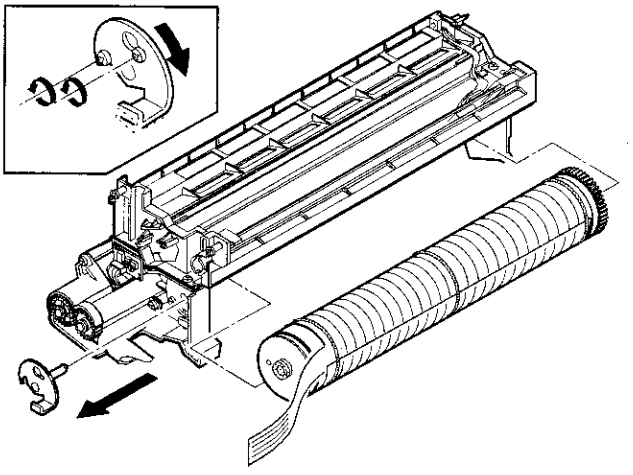
Digital multimeter (or ampere meter)
Note: use a multimeter with measuring range of 0 to 100 μA and error of ±1% or less.

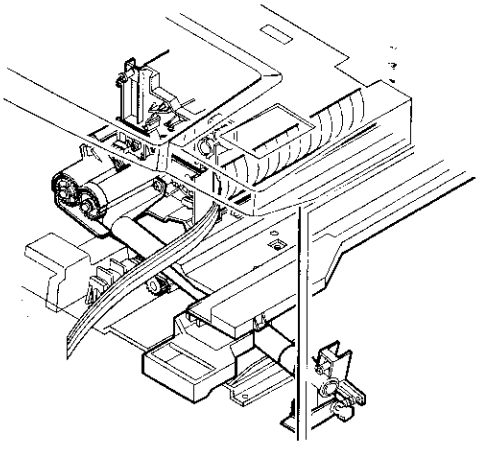
B. Adjusting the Transfer Charger Current

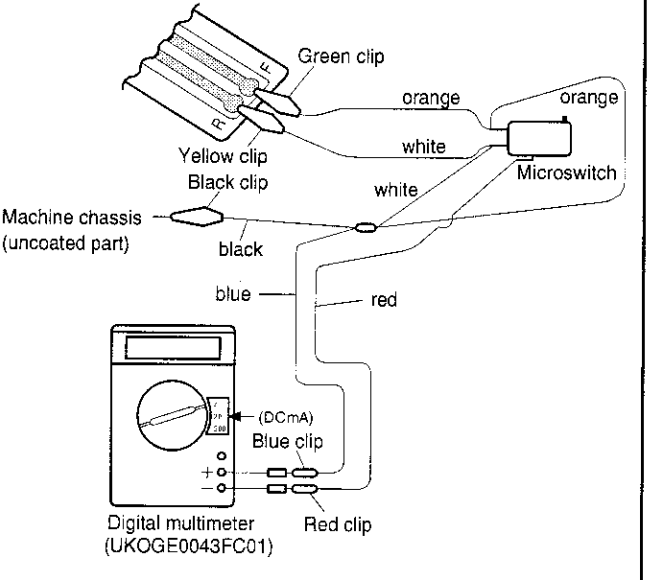
① Remove the developing unit, transfer/separation charger unit, main charger unit and waste toner bottle from the machine.
② Remove the processing unit from the machine.
When removing (attaching) the processing unit, do not grasp the toner feed pipe.
③ Remove the photoreceptor drum from the processing unit and mount the electrode sheet on the drum using adhesive tape.
④ Install the photoreceptor drum into the processing unit and attach the processing unit to the machine.
⑤ Attach the drum holder unit to the machine in the manner which allows drawing the lead of the electrode sheet from the developer tank side.
⑥ After cleaning the transfer charger wire, attach the transfer/separation charger unit to the machine. (Do not attach the main charger unit).
⑦ Connect the electrode sheet to the digital multimeter (or an ampere meter).
Manually turn on the door switch.
⑧ Measure the drum current on the sides of front and rear frame. The difference in current between the front and rear frame must be 5.0 μA or less.
a. Turn on the main switch and perform Simulation "8-06". (THVG will be ON for approx. 30 seconds)
b. Measure the drum current on the front and rear frame side.
- If the microswitch is OFF, the drum current on the side of front frame is indicated.
- If the microswitch if ON, the drum current on the side of rear frame is indicated.



c. Check that the difference in current between both sides is 5.0 μA or less. If the difference is more than 5.0 μA, replace the charger unit.
⑨ Adjust the THVG output voltage:
a. Turn on the main switch and perform Simulation "8-06". (THVG will be ON for approx. 30 seconds)
b. Use the THVG output control VR201 to adjust the THVG output voltage until it becomes –42±4 μA.







Note: Make sure the black clip is grounded at the machine chassis.
When using UKOGE0043CS01:
Control 1: set to DCmA
Control 2: set to 2
Red clip : connected to ⊕
Blue clip: connected to ⊖
When using a d.c. ampere meter:
Red clip : connected to ⊖ of d.c. ampere meter
Blue clip: connected to ⊕ of d.c. ampere meter

C. Checking the Electrostatic Main Charger Current

The drum current difference(balance) between the sides of front and rear frame is checked.

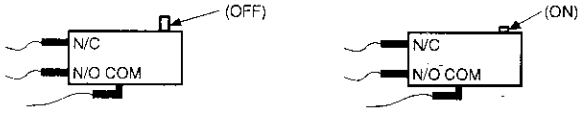
① Perform steps.

② Clean the saw-tooth plate of the main charger with polystyrene foam and attach the main charger to the machine.
(Do not attach the transfer/separation charger).
Manually turn on the door switch.

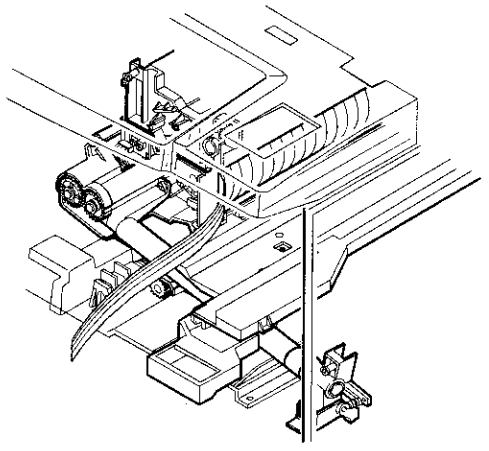
③ Measure the drum current on the sides of front and rear frame. The difference in current between the front and rear frame must be 8.0 μA or less.

a. Turn on the main switch and perform Simulation "8-02". (MHVG will be ON for approx. 30 seconds.)

b. Measure the drum current on the front and rear frame side.
- If the microswitch is OFF, the drum current on the side of front frame is indicated.
- If the microswitch if ON, the drum current on the side of rear frame is indicated.



c. Check that the difference in current between both sides is 8.0 μA or less. If the difference is more than 8 μA, replace the charger unit.



D. Adjusting the Electrostatic Main Charger Grid Voltage

① Turn off machine. Attach the developing unit and the drum holder unit to the machine.
(Do not use the electrode sheet).

② Attach the main charger unit to the machine. The machine should have all the charger units installed.

③ Turn on the main switch and check the grid voltage using Test command 44-11.
The grid voltage is displayed in two digits on the copy quantity display. The display changes in the sequence of N → TSM → P mode when the message feed key is pressed.

Mode	Figure	Grid voltage
Normal	56	–650V
TSM	52	–550V
Photo	50	–440V

NORMAL (Normal mode)
Set value: 650 = –650V output
To decrease the measurement voltage, make the set value smaller. (1 step: 1V)
To increase the measurement voltage, make the set value greater.

T/S (TSM mode)
Set value: 550 = –550V output
To decrease the measurement voltage, make the set value smaller. (1 step: 1V)
To increase the measurement voltage, make the set value greater.

PHOTO (Photo mode)
Set value: 440 = –440V output
To decrease the measurement voltage, make the set value smaller. (1 step: 1V)
To increase the measurement voltage, make the set value greater.

(Measure at check point CP-GB)

④ Remove the rear cover.

⑤ Connect the digital multimeter to the grid voltage pin (GB).

⑥ Set the measuring range of the digital multimeter to DCV. (Use the digital multimeter with measuring range of up to 1000 Vdc).

⑦ Turn on the front cover switch manually.

⑧ There is another method to check the grid votage as follows:
Turn on the main switch, and adjust the output adjusting control so that output voltage values in Simulation "8-02"(normal mode), "8-03"(photo mode) and "8-04"(TSM mode) are as follows:

TEST POINT CP-GB	Output Voltage
Normal mode	–650±5V
TSM mode	–550±5V
Photo mode	–440±5V

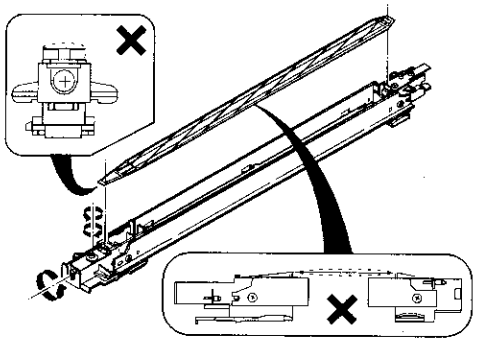
E. Adjusting the Separation Charger Output

① Attach the developing unit and the drum holder unit to the machine and turn on the machine.
(Do not use the electrode sheet).
② Attach the separation charger unit and drum holder unit to the machine. The machine should have all the charger units installed.
③ Remove the rear cover.
④ Connect the digital multimeter to the SHVG output check pin (BCDCCP).
⑤ Set the measuring range of the digital multimeter to DCV.
⑥ Turn on the door switch manually.
⑦ Perform Simulation "8-07". (The SHVG will go on for approx. 30 seconds).
⑧ During the simulation, adjust the SHVG output control VR502 so that the output monitoring voltage (bias) BCDCCP of the separation charger is 0±10 Vdc.

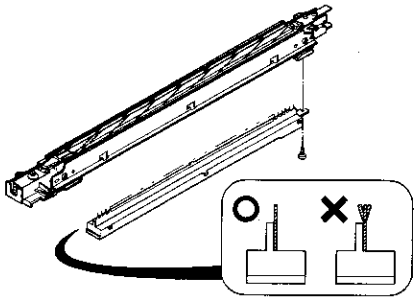
(3) Notes on maintenance for high-voltage units

A. Electrostatic Charger Unit

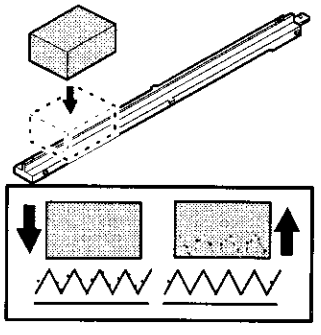
① Do not distort nor stain the screen grid during handling. Be sure that the screen grid is secured in place.



② The teeth of the saw-tooth assembly must be free of distortion.

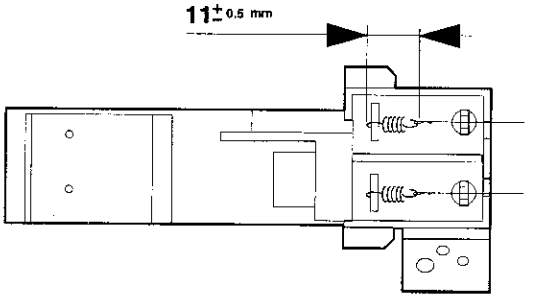


③ Do not touch the inside of the MC case(saw-tooth assembly side), the screen grid, and the saw-teeth.
④ The saw-teeth should be cleaned with polystyrene foam as shown in the figure.

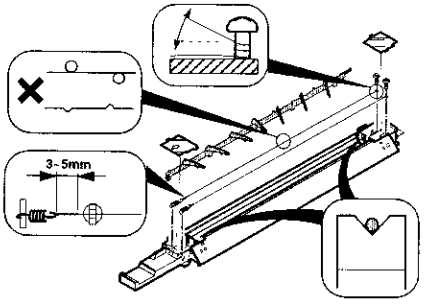


B. Transfer/Separation Charger Unit

① The charger spring must be 11±0.5 mm in length.



② The charger wire must be free of distortion and fitted in the holder groove.

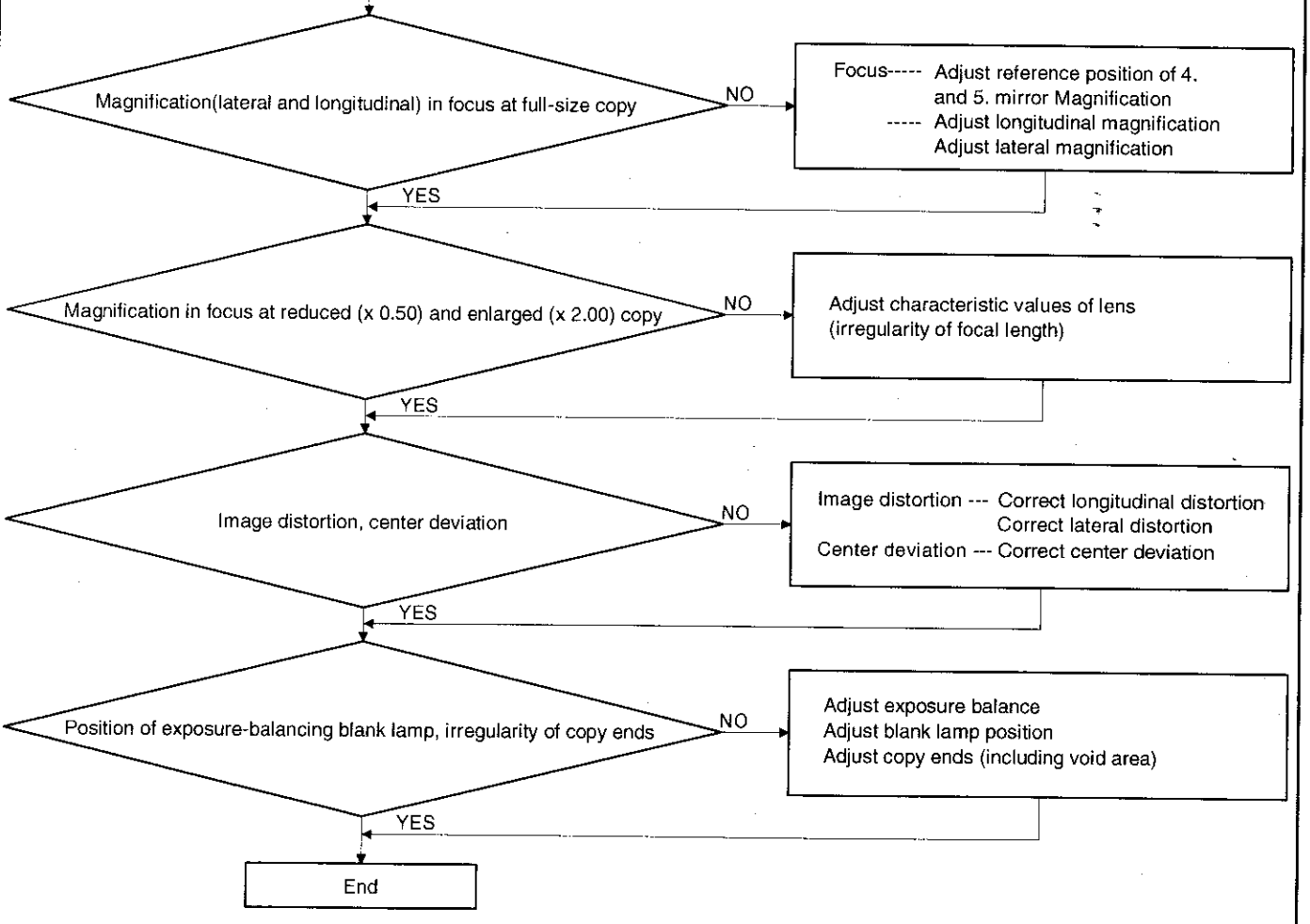


③ The charger case must be free of oil, grease and foreign matter.
④ The wire must be cleaned with alcohol.

3. Optical System

The optical system must be adjusted according to the following flowchart:

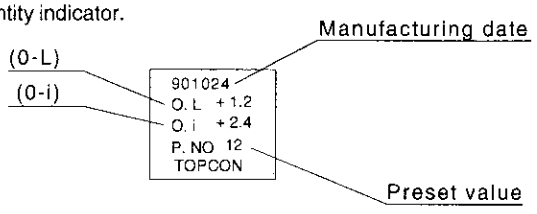
Check the following preset values depending on the focal length of lens (lens number):
- Reference position of 4. and 5. mirror Reference position of lens. ..... Simulation 48-01
- Reference position of 4. and 5. mirror ..... Simulation 48-01
- Lateral magnification ..... Simulation 48-02
- Lens characteristics ..... Simulation 26-09, 26-08


Magnification(lateral and longitudinal) in focus at full-size copy
NO
Focus----- Adjust reference position of 4. and 5. mirror Magnification
----- Adjust longitudinal magnification
Adjust lateral magnification
YES
Magnification in focus at reduced (x 0.50) and enlarged (x 2.00) copy
NO
Adjust characteristic values of lens (irregularity of focal length)
YES
Image distortion, center deviation
NO
Image distortion --- Correct longitudinal distortion
Correct lateral distortion
Center deviation --- Correct center deviation
YES
Position of exposure-balancing blank lamp, irregularity of copy ends
NO
Adjust exposure balance
Adjust blank lamp position
Adjust copy ends (including void area)
YES
End

* The exposure balance, blank lamp position and copy ends can be separately adjusted. But items other than these must be adjusted according to the steps shown in the above flowchart.

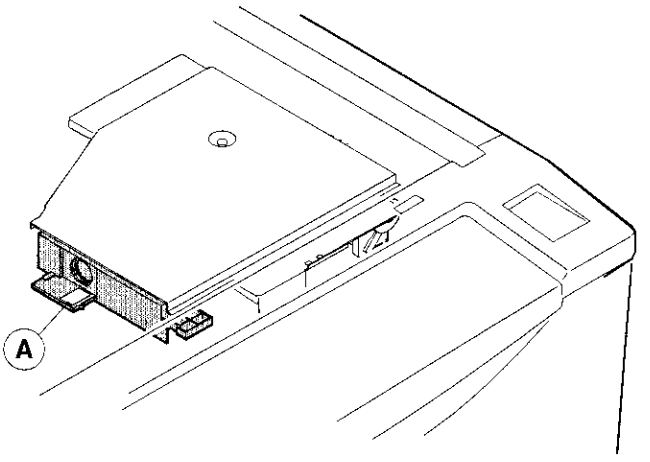
(1) Adjusting the Reference Position of Lens

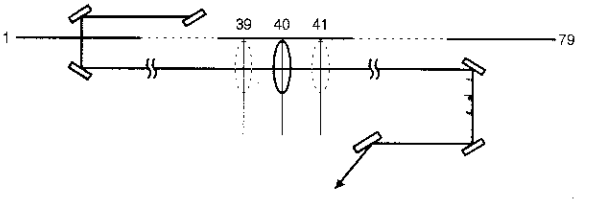
A reference value depending on lens characteristics must be input for adjusting the reference position of lens.
(This value determines the home position of lens).
(Procedure)
Perform Simulation 48-01 [=↵] .
[C] → [=↵] → [0] → [=↵] → [4] → [8] → [PSW] → [1] → [PSW] causes a preset value or "40" to → be shown on the copy quantity indicator.



Label contents

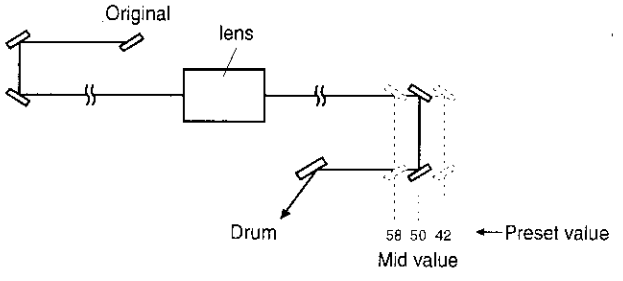
Substitute the value (irregularity of distance between original and lens ⇒ –3.9 to +3.9) on the label applied on A shown in the right figure, for "0-L" of the expression "O-L" is the value on label.
40 – [(0 – L) x 5] = reference value for correction
and type the result.
Eg.: If the result (reference value for correction) is 1.2 ;
40 – (1.2 x 5)= 34 value to be input





(2) Adjusting the Reference Position of 4. and 5. Mirror

A reference value corresponding to lens characteristics must be input also for adjusting the reference position of 4. and 5. mirror.
(This value determines the home position of 4. and 5. mirror base).
(Procedure)
Perform Simulation 48-01 [=↵] .
[C] → [=↵] → [0] → [=↵] → [4] [8] → [PSW] → [1] → [PSW] causes a preset value or "42" to be shown on the copy quantity indicator.
Substitute the value described above for "0-i" of the expression
42 x [(0 – i) x 10]= reference value for correction and type the result.
Eg.: If the result (reference value for correction) is 1.2 ;
50 – (1.2 x 10) = 38 value to be input
If the preset reference value is larger than the mid value "50", the 4. and 5. mirrors are set further away from lens.
If the preset reference value is smaller than mid value "50", the mirrors are set closer to lens.



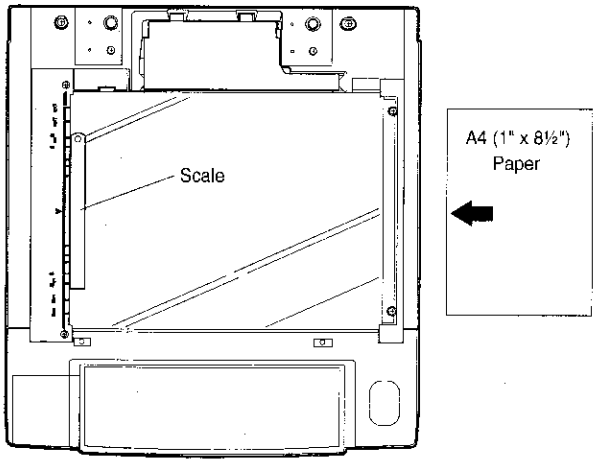
* To select inputs for No.4/5 mirror reference position and the lens reference position adjustment [7]-3-(1), use [➡] key (scrol display key). The previously set figures are displayed on the LCD.

(3) Adjusting the Longitudinal Magnification

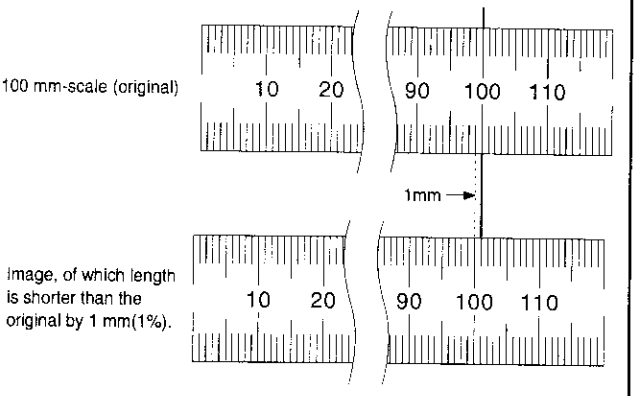
This adjustment must be done while the mirror bases A, B and C are in parallel with each other and the lens is focalized.

- When the lens home position sensor (LHPS) is moved or replaced.
- When the lens is replaced.
- When the mirror base is moved or replaced.
- When the main PWB is replaced.
- When self diag U2 occurs.
- When RAM in the main PWB is replaced.

① Set a scale on the original table as shown in the right figure.
② Take a full-size copy of the scale using an A4-size(11" x 8.5") paper.
③ Compare the image on the paper with the scale.
④ Determine the correction factor for longitudinal magnification according to the following expression:
Correction factor for longitudinal magnification
$= \frac{(\text{original size} - \text{copy size})}{\text{original size}} \times 100\ (\%)$
Eg.: Correction factor for longitudinal magnification
$= \frac{(100 - 99)}{100} \times 100 = 1$



⑤ Perform Simulation 48-01 [=↵].
[C] → [=↵] → [0/◊] → [=↵] → [4] → [8] → [PSW] → [1] → [PSW] causes a preset value of longitudinal magnification to be indicated.
⑥ Determine a preset value of longitudinal magnification according to the following expression:
Preset value of longitudinal magnification = previous preset value(indicated at step ⑤) + [correction factor for longitudinal magnification x 10]
Eg.: Preset value = 25 + [1 x 10] = 35
⑦ Type the preset value of longitudinal magnification:
[ ] → [ ] → [PSW]
Changing the preset by "1" provides the magnification change of 0.1 %.
⑧ Take a full-size copy of the scale and compare the image length with the scale length.
⑨ The image length must be the same as the scale length. Otherwise, repeat the above steps ① to ⑧ until this requirement is met.
⑩ Press the clear all key to clear Simulation 48.



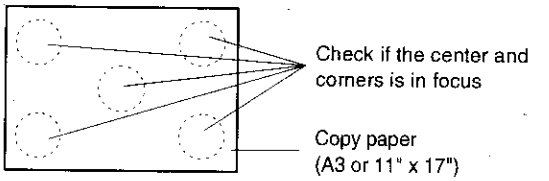
(4) Adjusting the Resolution

① Perform Simulation 48-01 to check that a preset value corresponds to a focal length of lens used:
[C] → [0/◊] → [0/↵] → [=↵] → [4] → [8] → [PSW] → [1] → [PSW].
When the ready lamp is lit, a preset value is indicated.
② If no preset value exists, set a reference value according to (2)"Adjusting the reference position of 4. and 5. mirror". Then take a copy of "UKOG-0089CSZZ" and check the resolution.
③ When changing a preset value:
[ ] → [ ] → [PSW].

Checking Procedure
After adjusting the reference position of 4. and 5. mirror, check as follows:
① Set the test chart UKOG-0089CSZZ or a resolution test chart on the original table.
② Take a full-size copy.
③ Check if the center and corners of the copy paper is in focus.
④ The resolution must be at least 5.0 lines/mm in the center and 4.5 lines/mm in the corners. Otherwise, repeat the steps ② to ④ of (2) while changing the preset value by 1 at a time, until this requirement is met.

1. FRONT/REAR ADJ
LENS: 45MB:

Applied Material: UKOG-0089CSZZ (Test chart)



(5) Adjusting the Lateral Magnification

The lateral magnification should be adjusted in the following cases:

- When the main PWB is replaced.
- When the RAM in the main PWB is replaced.
- When self diag U2 occurs.
- When the mirror motor is replaced.

Change the mirror base scan speed to adjust the lateral magnification ratio.

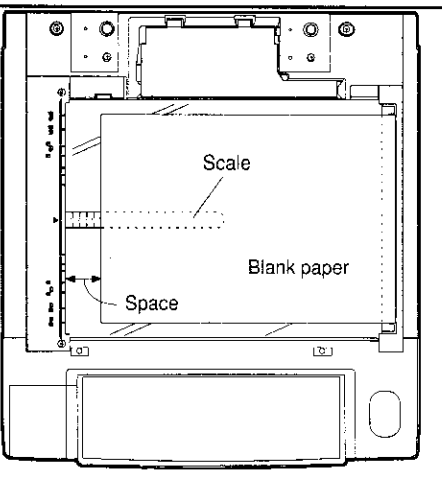
① Set a scale on the original table as shown in the figure and perform Simulation 48-02.
The machine starts the warm-up cycle and the ready lamp is lit. At the same time a preset value (ranging from 15 to 35) is indicated.
Now take a full-size copy of the scale and determine the correction factor for lateral magnification according to the following expression:
Correction factor for lateral magnification = [(original size – copy size)/original size] x 100 (%)

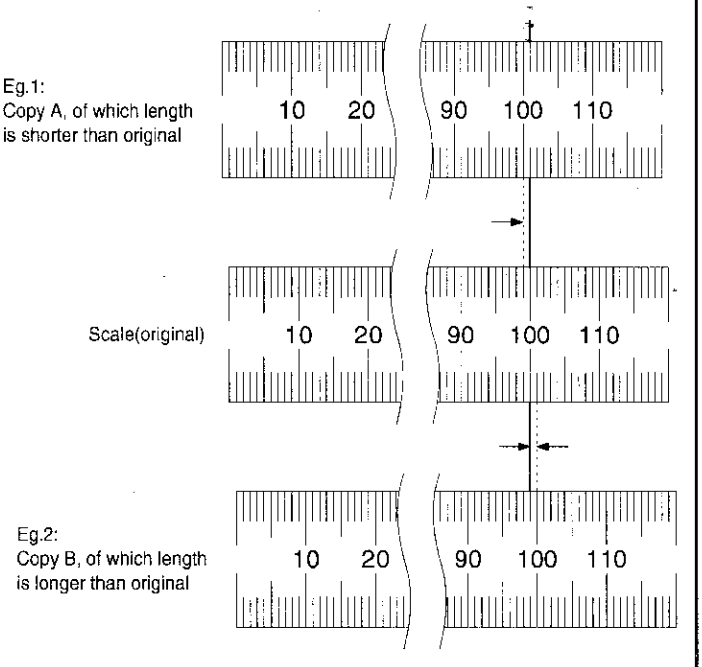
② Use the correction factor to change the indicated value:
Value to be input = (preset value) + (correction factor for lateral magnification(%)) x 10
- Eg.1: 35 = 25 + 1 x 10
- Eg.2: 15 = 25 + (–1 x 10)

When a new value is typed and the print switch is pressed, the new value is stored in memory and the ready lamp goes off.

③ Clear Simulation 48-02.

Note: In Simulation 48-02 the correctable range of the preset value is limited from15 to 35.





2. PAPER MOVING ADJUSTMENT (5-20-35)

(6) Inputting the Lens Travel Correction Value

(Simulation 26-08, 26-09)

<Inputting the lens characteristics>

The lens varies in focal length for each machine. The lens travel is required to correspond to the focal length of the lens. If the lens travels at a magnification would be constant among the machines in spite of the focal length irregularity, the magnification could vary depending on this irregularity.
To avoid this problem, we have prepared the table showing focal length ranks of lens and correction data (see the next page) which can be stored in memory at the time of Simulations described below. In order to copy properly at a magnification, the lens travel corresponding to its focal length is calculated on the basis of the stored data.

<When lens is replaced>

① Set correction data according to the "focal length ranks of lens and correction data" table at following Simulation:
[C] → [=.⌟] → [0/⌟] → [=.⌟] → [2] → [6] → [PSW] → [9] → [PSW] to perform Simulation 26-09.

When the ready lamp is lit, a preset value (ranging from 1 to 21) is indicated.

② Input a new preset value.
Eg.: When a value shown on lens is +1.2, a correction value to be input is 14 according to the table.

[C] → [=.⌟] → [0/⌟] → [=.⌟] → [2] → [6] → [PSW] → [8] → [PSW] to perform Simulation 26-08.

Value shown on the label	Test command 48-01	Test command 48-01 ↵	Test command 26-09 Zoom correction (No.4/5 mirror)	Test command 26-08 Zoom correction (lens)
+4.0	10	20	21	21
3.9	11	21		
3.8	12	22		
3.7	13	22	20	20
3.6	14	22		
3.5	15	23		
3.4	16	23		
3.3	17	24	19	19
3.2	18	24		
3.1	19	25		
3.0	20	25		
2.9	21	26	18	18
2.8	22	26		
2.7	23	27		
2.6	24	27		
2.5	25	28	17	17
2.4	26	28		
2.3	27	29		
2.2	28	29		
2.1	29	30	16	16
2.0	30	30		
1.9	31	31		
1.8	32	31		
1.7	33	32	15	15
1.6	34	32		
1.5	35	33		
1.4	36	33		
1.3	37	34	14	14
1.2	38	34		
1.1	39	35		
1.0	40	35		
0.9	41	36	13	13
0.8	42	36		
0.7	43	37		
0.6	44	37		
0.5	45	38	12	12
0.4	46	38		
0.3	47	39		
0.2	48	39		
+0.1	49	40	11	11
0	50	40		
−0.1	51	40		
0.2	52	41	10	10
0.3	53	41		
0.4	54	42		
0.5	55	42		
0.6	56	43	9	9
0.7	57	43		
0.8	58	44		
0.9	59	44		

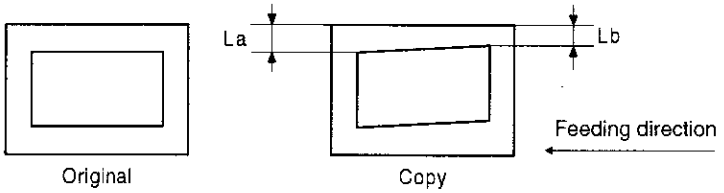
(Lens value input vs. test command input)

Value shown on the label	Test command 48-01	Test command 48-01 =↵	Test command 26-09 Zoom correction (No.4/5 mirror)	Test command 26-08 Zoom correction (lens)
1.0	60	45	8	8
1.1	61	45		
1.2	62	46		
1.3	63	46		
1.4	64	47	7	7
1.5	65	47		
1.6	66	48		
1.7	67	48		
1.8	68	49	6	6
1.9	69	49		
2.0	70	50		
2.1	71	50		
2.2	72	51	5	5
2.3	73	51		
2.4	74	52		
2.5	75	52		
2.6	76	53	4	4
2.7	77	53		
2.8	78	54		
2.9	79	54		
3.0	80	55	3	3
3.1	81	55		
3.2	82	56		
3.3	83	56		
3.4	84	57	2	2
3.5	85	57		
3.6	86	58		
3.7	87	58		

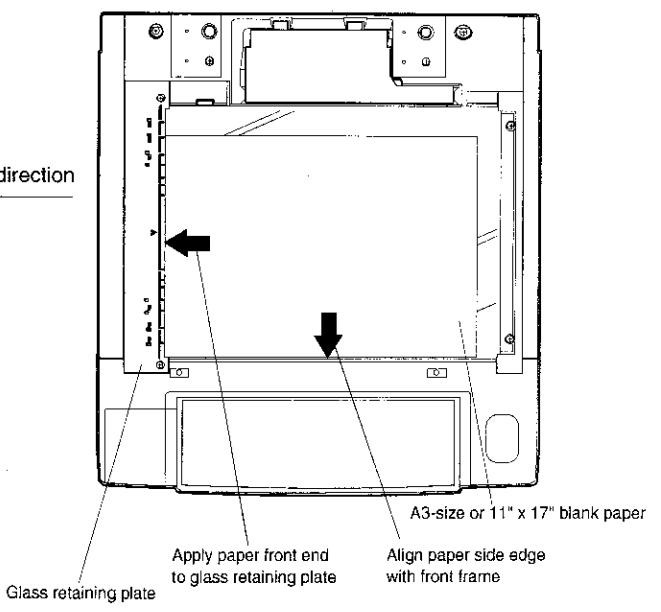
(Lens value input vs. test command input)

(7) Correcting the Longitudinal Distortion

Use this procedure when replacing the mirror base driving wire.



① Set an A3-size or 11" x 17" blank paper on the original table while applying the paper end to the glass retaining plate and aligning the paper side edge with the front frame, as shown in the right figure.
② Use an A3-size or 11" x 17" copy paper to take a full-size copy with the original cover opened.
③ Measure the width of solid at front and rear ends of the copy paper.


A3-size or 11" x 17" blank paper
Glass retaining plate
Apply paper front end to glass retaining plate
Align paper side edge with front frame

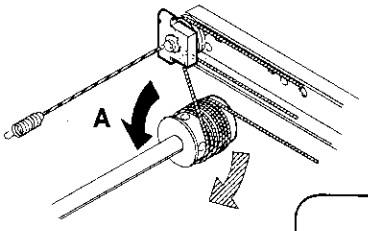
If the width of the front end solid (La) is equal to that of the rear end solid (Lb), no adjustment is required.
Otherwise, follow the steps ④ to ⑦ described below:

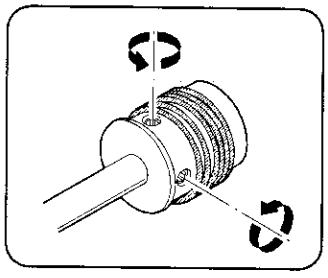
④ Loosen screws securing the mirror base driving pulley on the rear frame side.
If La is bigger than Lb, rotate the mirror base driving pulley on the rear frame side in the A direction. (Do not rotate the flange and the shaft of the mirror base driving pulley).
If La is smaller than Lb, rotate the mirror base driving pulley on the rear frame side in the B direction. (Do not rotate the flange and the shaft of the mirror base driving pulley).

⑤ Tighten the screws securing the mirror base driving pulley.

⑥ Repeat steps ① to ③.

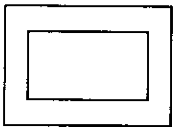
⑦ If La is not equal to Lb, repeat steps ④ and ⑤ until La=Lb.



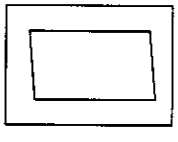


(8) Correcting the Lateral Distortion

If the lateral distortion occurs without the longitudinal distortion(distortion in the mirror base scanning direction), the lateral distortion can be corrected by adjusting the height of 2. and 3. mirror base and/or the eccentric roller of 4. and 5. mirror base.
The correction procedure is as follows:

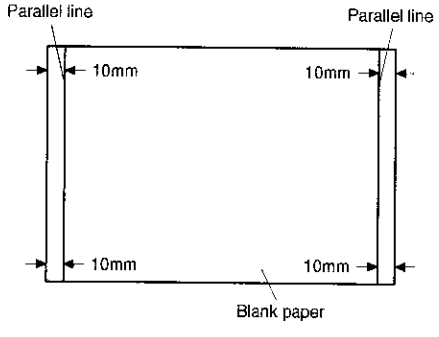


Original



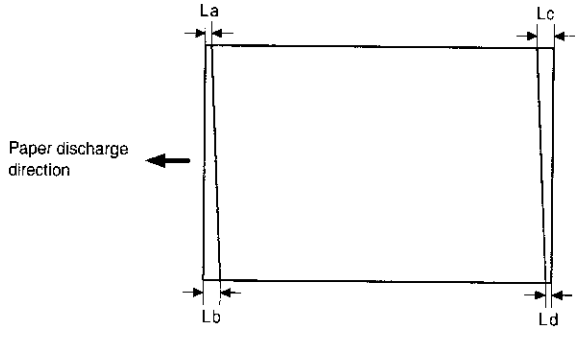
Copy

① Preparing the reference original:
On an A3-size or 11" x 17" blank paper, draw 2 parallel lines at the positions 10 mm away from the both ends.



② Take a full-size copy of the paper using an A3-size or 11" x 17" paper.

③ Measure and the distance between the paper end and the line at 4 positions (La, Lb, Lc and Ld).



If La=Lb and Lc=Ld, no adjustment is required.
If La>Lb(Lc<Ld), rotate the eccentric roller in one direction to raise the front frame side of the 4. and 5. mirror base unit.
If La<Lb(Lc>Ld), rotate the eccentric roller in the other direction to lower the front frame side of the 4. and 5. mirror base unit.
Note: Remember how much the roller is rotated.
(One rotation of the roller causes the height of the front frame side to change by 2 mm and the difference between La and Lb to change by 4 mm).

* After opening the front cabinet, the adjustment described above can be made through the access hole.

If the above procedure does not provide sufficient adjustment, follow the steps shown below:

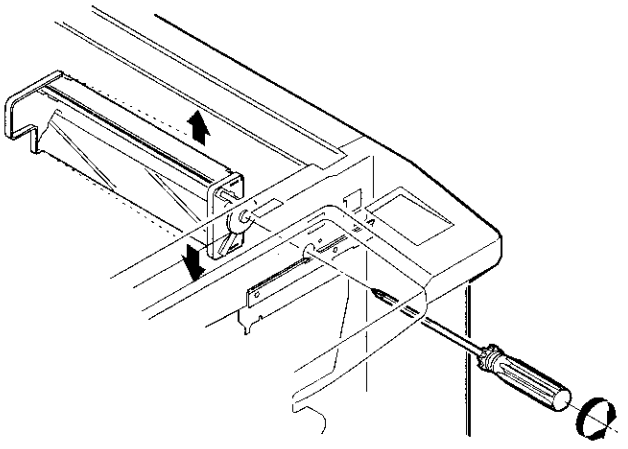
① Move the B rail of the mirror base upward or downward (in the arrow direction).
If La>Lb, raise the mirror base B rail on the paper discharge side by one-half of (La-Lb).
If La<Lb, lower the mirror base B rail on the paper discharge side by one-half of (Lb-La).
ex.:
When La=12 mm and Lb=9 mm, raise the mirror base B rail on the paper discharge side by 1.5 mm.

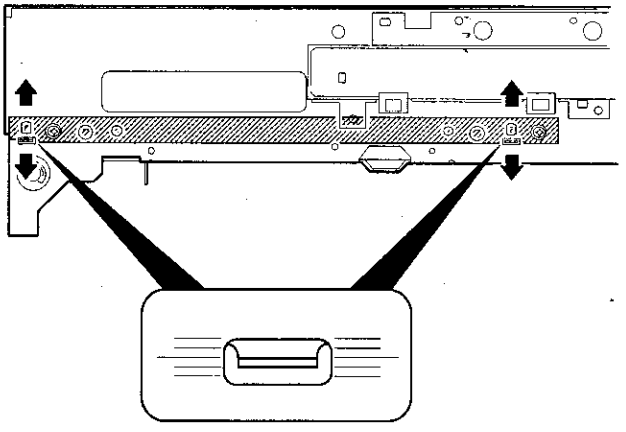
If Lc>Ld, lower the mirror base B rail on the paper discharge side by one-half of (Lc-Ld).
If Lc<Ld, raise the mirror base B rail on the paper discharge side by one-half of (Ld-Lc).
(Grasping the grip of the mirror base rail, move the mirror base rail).

② Adjust the eccentric roller as described in 1) until La=Lb and Lc=Ld.

③ After adjustment, manually rotate the mirror base driving pulley to check that the mirror base A and B do not come into contact with each other during full-scanning motion.

Note: If the mirror base rail is moved excessively, the mirror bases may contact with each other.

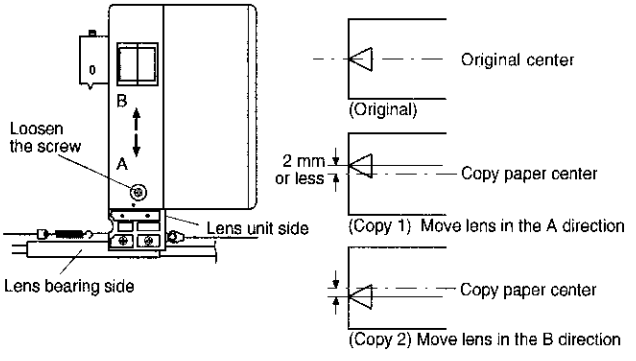




(9) Adjusting the Center Deviation

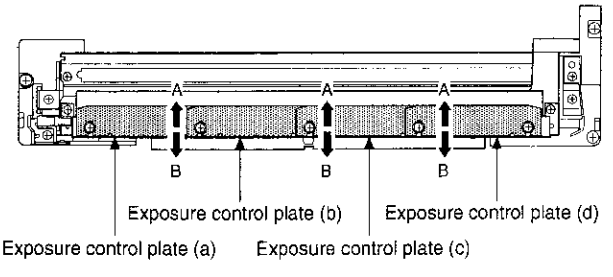
Take a full-size copy and compare the copy with the original.
If the deviation of the copy center from the original center, move the lens in the arrow direction so that the deviation is 2 mm or less.

Note: After moving the lens, adjust the position of the blank lamp because a change of the reference center position results in a change of the blank lamp position.

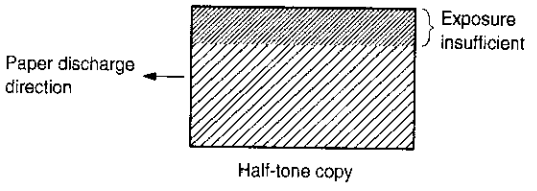


(10) Adjusting the Exposure Balance

Take a half-tone copy, and move the exposure control plate a, b, c and d to adjust the exposure balance. Movement of the plate in the A direction provides less exposure and the B direction more exposure.



Eg. If the copy is as shown in the figure, move the exposure control plate a in the B direction to achieve the exposure balance.

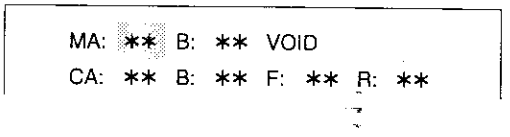


(11) Adjusting the Copy Lead Edge

Simulation 50-01 or 50-02 allows the copy adjustment.
(Full-size copy)
Image loss 0 ~ 3 mm (Registration)
Void area 1 ~ 3 mm

(When using Simulation 50-01)

Press the reduction key to set to 50%, and press the enlargement key to set to 200%.
Press the message forward scroll key to shift the highlight cursor, allowing selection.
[MA]: MFT (manual feed) RRC-A [CA]: CS (cassette) RRC-A
[MB]: MFT (manual feed) RRC-B [CB]: CS (cassette) RRC-B



Adjusting Procedure

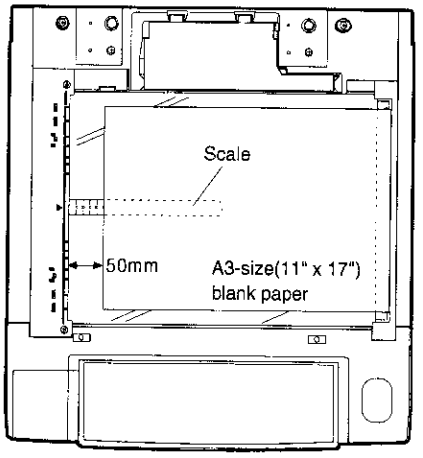
① Set a scale on the original table.
② [C] → [=↵] → [0/◊] → [=↵] → [5] → [0/◊] → [PSW] → [1] → [PSW] to perform Simulation 50. When the ready lamp goes on, a preset value (ranging from 1 to 99) is indicated. Content of RRC-A.
③ Set values of both A and B to 0 and take a copy of the scale at magnification of 100% and 200% respectively.
- A full-size(100%) copy can be taken by typing
- [0/◊] → [0/◊] → [➡] → [0/◊] → [0/◊] → [PSW] .
- A enlarged(200%) copy can be taken by typing [ENLARGE] → (After the lens moves, ready lamp ON) → [PSW] .

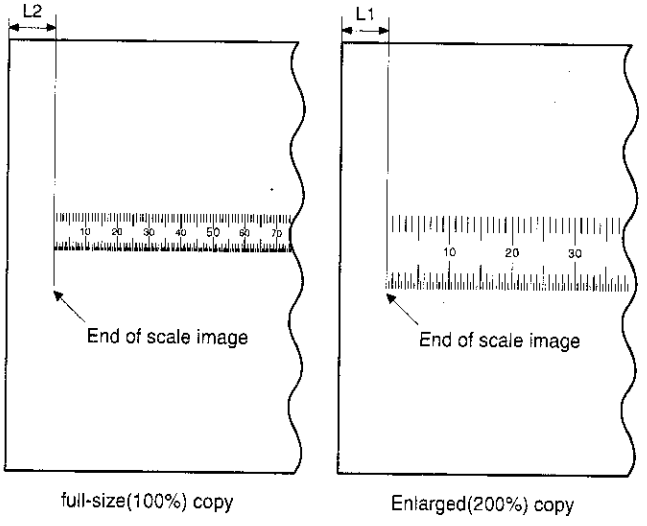
④ Measure a distance from the paper end to the image (scale) end of each copy, and calculate the values of RRC-A and RRC-B with the following expressions:

If the preset value of RRC-A is not appropriate, the images at the both magnifications differs in end position. RRC-B is a preset value used to control the RRC ON-timing so that the end of the drum image is aligned with the end of a copy paper.

- L1: Lead edge deviation at 200% magnification
- L2: Lead edge deviation at 100% magnification
- RRC-A = 4.7222 x (L1 – L2)
- RRC-B = 7.2202 x L2 – 3.6101 x L1

⑤ Using the ten keys, input the values of RRC-A and RRC-B given by the expressions shown above. For input procedure see 3).
⑥ Take copies at 200%, 100% and 50% magnification and check the deviation difference at each magnification is less than approx. 1 mm.
If the difference is larger than 1 mm, repeat step ③ to ⑥.
⑦ Take a 100% copy to check the image loss for 4 mm or less. If the image loss is larger than 4 mm, change the content of RRC-B so that the range of the image loss is 3 mm or less.
Note: The image loss value adjusted as described above is the image loss value adjusted in Simulation 50-01, and not the final value.
⑧ Set a scale and an A3-size(11" x 17") blank paper on the original table as shown in the figure.





⑨ Operate the scrol display key to set to the void adjustment mode of the LCD.

⑩ Take a copy. Type a value for adjusting the end void area of the full-size copy so that, measured with the scale image, the solid edge is 1 ~ 4 mm away from the paper end.

The key operation □ → □ → [PSW] provide a copy and sets the input value. The input value of "1" corresponds to 0.2 mm in void area. Larger input value provides larger void area.

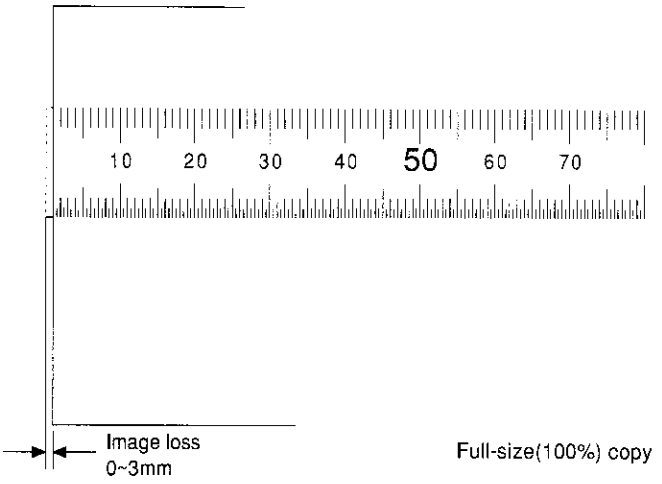
Simulation No. 50-1
1. Lead edge image position adjustment
2. Lead edge image position adjustment (Calculation fomula)

MFT RRC	A:	**	B:	**	VOID			
CS RRC	A:	**	B:	**	F:	**	R:	**

⑪ Take a full-size copy and check if the image loss and the void area meet the following standards:
(Standard value)
Image loss: 0 ~ 4 mm
Void area: 1 ~ 4 mm

⑫ Press the clear key to clear Simulation 50-01.

Note: After changing the RRC-A and RRC-B settings, always adjust the void area of copy end.



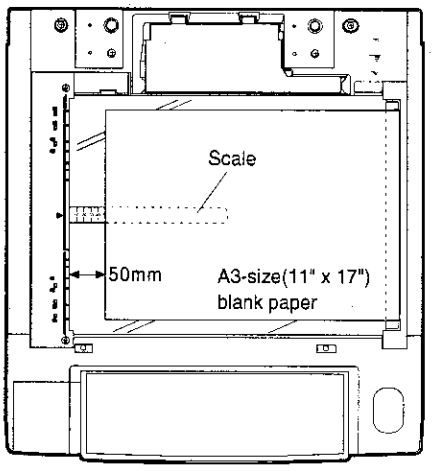
(When using Simulation 50-02)

The key and indicator functions in Simulation 50-02 are the same as those in Simulation 50-01.
Simulation 50-02 permits the values of L1 and L2 to be directly input and the end adjustment to be easily performed.

Adjusting Procedure

① Set a scale on the original table.

② [C] → [=⌟] → [0/◊] → [=⌟] → [5] → [0/◊] → [PSW] → [2] → [PSW] to enter the Simulation 50-02 mode.
The machine starts warm-up operation.

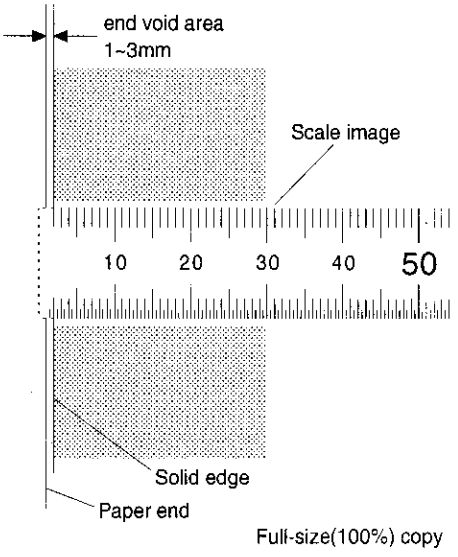


ML1:	***	L2:	***	VOID				
CL1	***	L2:	***	F:	**	R:	**	

③ Display example:
- L1: Lead edge deviation at 200% magnification (○○○ mm: 3-digit)
- L2: Lead edge deviation at 100% magnification (XXX mm: 3-digit)

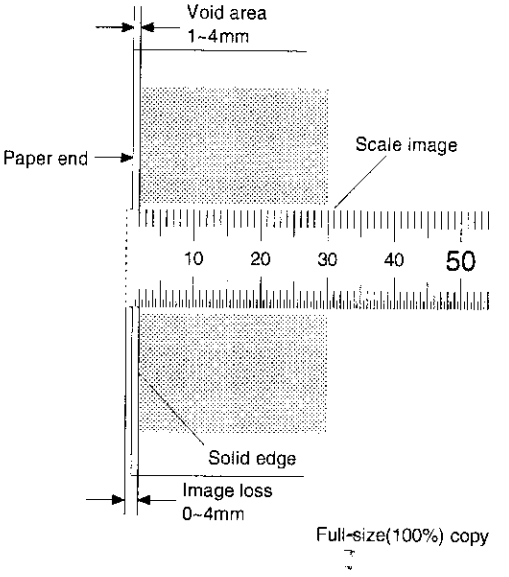
Indication example of copy quantity indicator
42.5 mm → [4] [2] [5] → indicated as [2] [5]

④ Using the scrol display key and ten keys, set both A and B values to 0 and take a copy at magnification 100% and 200% respectively.
- An 100% copy can be taken by typing [0/◊] → [0/◊] → [0/◊] → [➡] → [0/◊] → [0/◊] → [0/◊] → [PSW] .
- A 200% copy can be taken by typing [ENLARGE] → (After the lens moves, ready lamp ON) → [PSW] .



⑤ Measure the distance from the paper end to image(scale) end of the 200% and 100% copy, and using the scrol display key and the ten keys, type the L1 and L2 values. Type all three digits.
The RRC-A and RRC-B values of Simulation 50-01 are automatically calculated and stored in memory.
Input Procedure
Assuming the L1 is 25.4 mm and L2 is 15.0 mm:
After checking that the last digit of the magnification indicator is A, [2] → [5] → [4] → [➡] → [1] → [5] → [0] → [PSW] .

⑥ Adjust and check the deviation, image loss and void area in the same manner as in case of Simulation 50-01.



4. Adjustment of Copy Density

1. When must the copy density be adjusted ?

- When doing maintenance;
- After adjusting the output current of the main charger and transfer charger, the bias voltage of the separation charger and the grid voltage (After replacing the charger unit and/or the high voltage unit);
- After adjusting the developing bias;
- After replacing parts in the AC PWB unit;
- After replacing the automatic exposure sensor;
- After replacing the copy lamp;
- After replacing the optical unit;
- After disassembling, repairing and/or adjusting the optical unit;
- After moving the exposure control plate;
- After replacing the drum;
- After replacing the main substrate

2. Notes on adjustment of copy density

Before adjusting the copy density, do the followings:

① Clean the optical system(original glass plate, lens, mirror, copy lamp, reflector).

② Clean the automatic exposure sensor (clean the surface of the photosensor with a soft cloth soaked with alcohol or water).
(Note: The use of dry cloth will cause dust adhesion on the surface of the sensor due to static electricity).

③ Clean the (transfer and separation) charger wire and the screen grid.

④ Clean the blank lamp and the separation lamp around the drum holder unit.

⑤ Clean the drum cleaning blade. (After cleaning, always apply powder on the blade).

Note: Perform the manual-exposure density adjustment first, and then perform the auto-exposure density adjustment.

Note: • This machine automatically performs the correction to the optical system dirt.
When Simulation 46-01 is performed, each mode correction is initialized. When performing Simulation 46-01, perform the adjustments of all modes.

• This machine automatically performs the correction to the sensitivity due to photoconductor aging. When a copy is made in Simulation 46-01, the correction state will be initialized.

3. Procedure for copy density adjustment

(1) Initial setting of auto-exposure density level (User adjustment)

① Enter the key operator code.

② Execute program No. 20.

③ Push the SCROLL key.

④ Select "3" with the ten key.

The following message is displayed on the LCD.

```
AUTO EXPOSURE ADJUST.
          ↓
1.  2.      3. STD      4.  5.
← LIGHTER              DARKER →
```

⑤ Press [CA] key to cancel the set mode.

(2) Initial setting of TSM mode (User adjustment)

① Execute the key operator code.

② Execute program No. 22.

0: Cancel, 1: Setting

③ Select "0" with the 10 key pad.

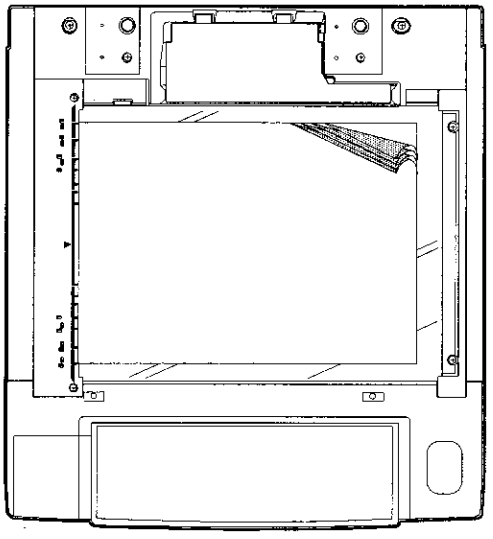
④ Cancel the setting mode with [CA] key.

(3) Adjustment of AE sensor level

① Perform Simulation 47. (The mirror base makes scanning motion and stops at AE sensor level measuring position).

② Place four or five A3-size (or 11" x 17") papers one upon another on the original table.

③ Press the print switch again. The copy quantity indicator shows the AE sensor output level for blank paper, which is stored in memory.



(4) Setting of drum sensitivity

① Perform Simulation 26-07 and check that the first digit of the 4-digit drum number printed on the front-frame sided drum flange is shown on the copy quantity indicator.

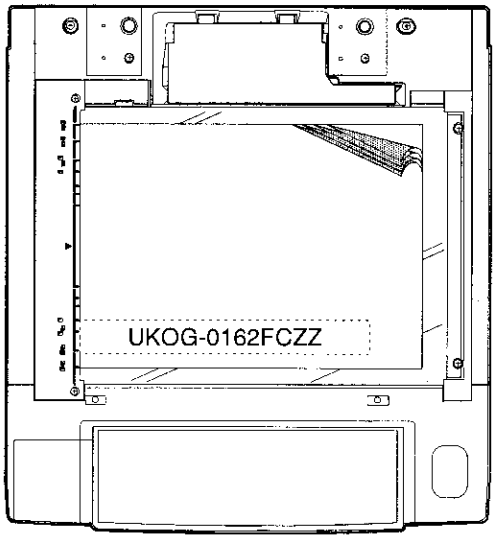
② If the indicated number differs from the drum number, press the copy quantity key to change the setting.

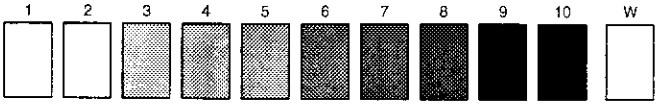
Note: If the setting is done with the copy quantity key, the indicated number is limited to 1, 2 or 3.

(5) Setting of test chart

① Align four or five papers with at least 120 mm in width and approx.420 mm in length one upon another.

② Set the test chart (UKOG-0162FCZZ) on exposure glass towards machine front side as shown.





UKOG-0162FCZZ DENSITY No.	1	2	3	4	5	6	7	8	9	10	W
UKOG-0089CSZZ DENSITY No.	0.1		0.2		0.3				0.5	1.9	0
KODAK GRAY SCALE		1		2		3		4		19	A

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(6) Adjustment of copy density

A. Checking the developing bias output
Check that the output value is −150 V when the exposure is set to "1" in the manual exposure mode. Perform Simulation 8-01 for checking the developing bias.

B. Adjusting the density in manual exposure mode

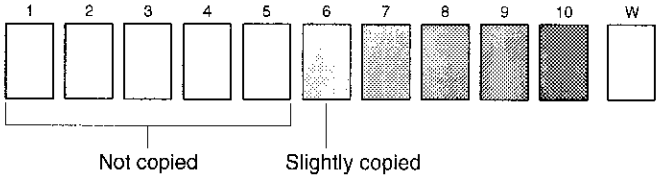
① Perform Simulation 46-01 for adjusting the copy density.
The exposure indicator of the operation panel shows "1" of the manual copy mode.

② Check that the cursor is on ME.1.
IF the cursor is not on ME.1, use ➡ message scroll key to select ME.1.

③ Make a copy.
Check that the "6" of UKOG-0162FCZZ (or 0.5 of UGOG-0089CSZZ) has slightly copied and "5"(0.3) is not copied.

<When light> Decrease the value shown on the copy quantity indicator.
<When dark> Increase the value shown on the copy quantity indicator.
* available values : 1-99

ME1	ME5	TS1	TS5	PE1
PE5	AE1	AE5	AT1	AT5

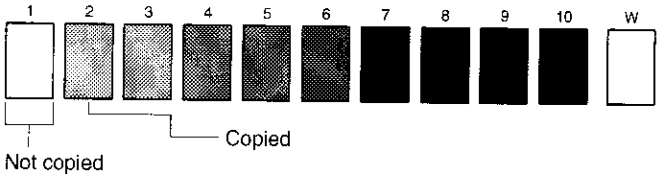


④ When the copy density meets the above requirement, press ➡ key to highlight "ME5:".

⑤ Make a copy.
Check that the "2" of UKOG-0162FCZZ (or 0.2 of UGOG-0089CSZZ) has slightly copied and "1"(0.1) is not copied.

<When light or dark> See 2).

ME1	ME5	TS1	TS5	PE1
PE5	AE1	AE5	AT1	AT5



C. Adjusting the TSM mode

① Press [➡] key to highlight "TS1:".

② Perform adjustments of TS1 and TS5 similarly to ME1 and ME5.
Procedure B: ② ~ ④

ME1	ME	TS1	TS5	PE1
PE5	AE1	AE5	AT1	AT5

D. Adjusting the photo mode

① Press [➡] key to highlight PE1.

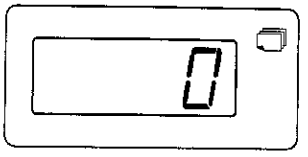
② Perform adjustments of PE1 and PE5 similarly to ME1 and ME5.
Procedure B: ② ~ ④

ME1	ME5	TS1	TS5	PE1
PE5	AE1	AE5	AT1	AT5

E. Adjusting the auto(normal) mode

① Press [➡] key to highlight AE1.

② Enter "0" for AE1.



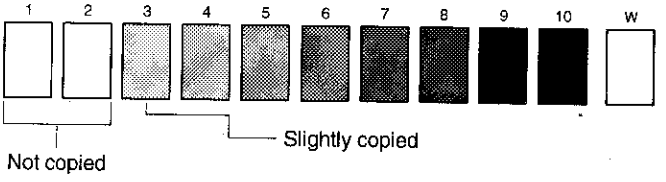
③ Press [➡] key to highlight AE5.

④ Make a copy.
Check that the "3" of UKOG-0162FCZZ (or 0.2 of UGOG-0089CSZZ) has slightly copied.
If the above condition is not met, readjust as follows:

<When light> Decrease the value shown on the copy quantity indicator.

<When dark> Increase the value shown on the copy quantity indicator.

ME1	ME5	TS1	TS5	PE1
PE5	AE1	AE5	AT1	AT5

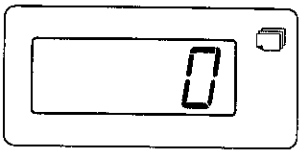


(2) Adjusting the auto (TSM) mode

① Press [➡] key to highlight AE1 (TS).

② Enter "0" for AE1 (TS).

ME1	ME5	TS1	TS5	PE1
PE5	AE1	AE5	AT1	AT5



③ Press [➡] key to highlight AE5 (TS).

④ Perform adjustments similarly to auto exposure mode (normal mode).
Procedure E: ⑤

Procedures for Adjusting the Copy Density

Item	Description
(1) Auto-exposure density level	3 (Normal level) Sim 26-18
(2)Initial setting of TSM mode	0 (Cancel) Sim 26-18
(3) Setting of AE sensor characteristics	Perform Simulation 47
(4) Setting of drum sensitivity	Perform Simulation 26-07
(5) Setting of test chart	Test chart comparison table

UKOG-0162FCZZ DENSITY No.	1	2	3	4	5	6	7	8	9	10	W
UKOG-0089CSZZ DENSITY No.	0.1		0.2		0.3				0.5	1.9	0
KODAK GRAY SCALE		1		2		3		4		19	A

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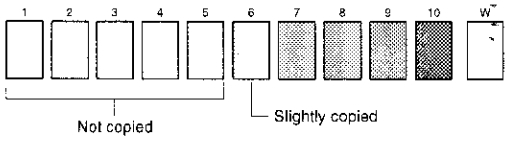
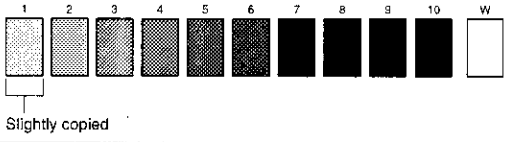
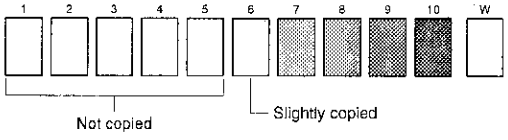
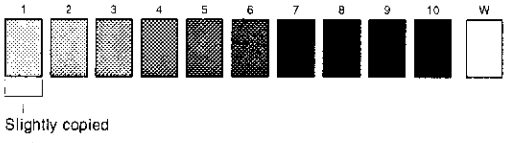
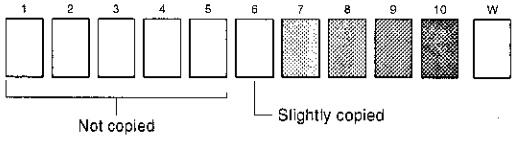
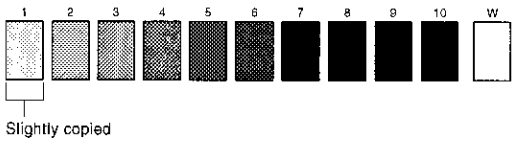
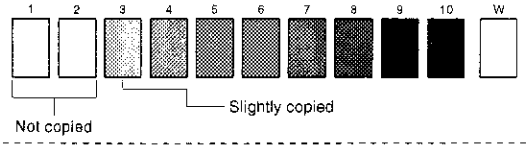
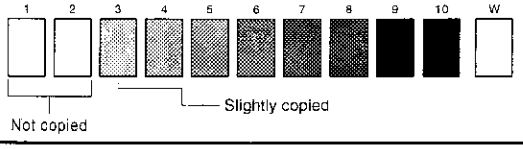
(6) Adjustment of copy density	
A. Adjusting the developing bias output	−150 V (manual exposure 1) Perform Simulation 8-01
B. Adjusting the manual-exposure copy density	Perform Simulation 46-01
ME 1	
ME 5	
C. Adjusting the TSM mode	
TS 1	
TS 5	
D. Adjusting the copy density in photo mode	
PE 1	
PE 5	
E. Adjusting the auto-exposure copy density	
(1) Normal mode AE 1	Input "0"
AE 5	
(2) TSM mode AE 1	Input "0"
AE 2	

5. Adjustments relating to process control

(The adjustment procedures differ according to the state of service maintenance.)

A. Adjustment when installing the machine

- Unpack the machine (lock release).
- Install and supply the supply parts.
- Turn on the power.

(1) Execute simulation No. 25-2. Toner density reference value setting
Over toned error → EE(EL)
Under toned error → EE(EU)

B. Adjustment in maintenance within the life of supply part

- Complete the maintenance.
- Turn on the power.

(1) Execute simulation No. 44-1. Process control state check
[+ 1] Process control correction valid
[+ 2] Optical system dirt correction valid
[+ 4] OPC drum film wear correction valid
[+10] Toner control A correction valid
[+20] Toner control B correction valid
Note: [37] All valid
For this adjustment, check that the setting value is "37."

(2) Compulsorily execute simulation No. 44-6 process control.

(3) Execute simulation No. 46-1 copy exposure adjustment.
Execute copy exposure adjustment according to the procedure of [8]-5.

C. Adjustment when replacing the developer

- Complete replacement of the developer.
- Turn on the power.

(1) Execute simulation No. 25-2. Toner density reference value setting
Over toned error → EE(EL)
Under toned error → EE(EU)

(2) Execute simulation No. 44-6 compulsory execution of process control.

(3) Execute simulation No. 46-1 copy exposure adjustment.
Execute the copy exposure adjustment according to the procedure of [8]-5.

D. Adjustment when replacing the drum (Photoconductor)

- Complete replacement of the drum.
- Turn on the power.

(1) Execute simulation No. 24-7 drum film wear correction counter reset.

(2) Execute simulation No. 44-6 compulsory execution of process control.

(3) Execute simulation No. 44-2 drum mark sensor level adjustment.
Standard value: 204 ±10

(4) Execute simulation No. 46-1 copy exposure adjustment.
Execute the copy exposure adjustment according to the procedure of [8]-5.

E. Adjustments when replacing the developer and the drum (photoconductor)

- Complete replacement of the drum.
- Complete replacement of the developer.
- Turn on the power.

(1) Execute simulation No. 24-7 drum film wear correction counter reset.

(2) Execute simulation No. 25-2 toner density reference value setting
Over toned error → EE(EL)
Under toned error → EE(EU)

(3) Execute simulation No. 44-2 drum mark sensor level adjustment.
Standard value: 204±10

(4) Execute simulation No. 44-6 compulsory execution of process control.

(5) Execute simulation No. 46-1 copy exposure adjustment.
Execute the copy exposure adjustment according to the procedure of [8]-5.

F. Adjustment when replacing/cleaning the drum mark sensor

(1) Execute simulation No. 44-2 drum mark sensor level adjustment.
Standard value: 204±10

G. Adjustment when replacing/cleaning the image density sensor

(1) Execute simulation No. 44-3 image density sensor level adjustment.
Standard value: 204±10

H. Adjustment when replacing the sensor level adjustment VR PWB

Execute the procedures of F and G in the above.

1. Note: This model emplyes the high-sensitivity drum, which requires special care against pre-exposure.

1) Never expose the drum outside the bag. (Keep it in a black bag.)

**2) When istalling this model, avoid facing the front cover toward a light source or window.
Avoid opening the front cover as far as possible.**

2. Other note

1) If starting powder is attached to the density sensor when replacing the drum/blade, it may cause faulty operations of the sensor. Be sure to clean and remove powder.

(Trouble codes and countermeasures)

Trouble code	Sub code	Content	Possible cause	Countermeasure
F2	31	Image exposure sensor error Photoconductor surface reflection detection error Copier operation halt when sensing	Dirt on the image density sensor (ID)	Clean the image density sensor and its peripheral. Use soft cloth immersed in water or alcohol to clean the sensor surface.
			Dirt on the drum surface by incomplete cleaning	Check the cleaning blade and the photoconductor drum surface and replace them if necessary.
			Image density sensor (ID) sensing level is not adjusted. Image density sensor (ID) PWB trouble * Process control VR PWB trouble	Execute simulation No. 44-3. (Set to 204±10 with VR2.)
F2	32	Drum mark sensor trouble Surface level and drum mark sensing abnormality Copier operation halt when sensing.	Dirt on the drum mark sensor (DM)	Clean the drum mark sensor (DM) and its peripheral. Use soft cloth immersed in water or alcohol to clean the sensor surface.
			Dirt on the drum surface by incomplete cleaning	Check the cleaning blade and the photoconductor drum surface, and replace them if necessary.
			Drum mark sensor (DM) sensing level is not adjusted. Improper drum (drum without mark) * Drum mark sensor (DM) PWB trouble * Process control VR PWB trouble	Execute simulation No. 44-2. (Set to 204±10 with VR1.)
F2	35	Process control operation failure When ① or ② is detected, process control is fixed to the reference condition. In case of an accidental trouble caused by the change in environments (temperature, humidity), if the inside state of the machine recovers, then the trouble will be cleared.	① Image density is too high to be corrected. (When executing simulation No. 44-6) Developer/toner density changes greatly. Humidity and temperature is low.	Check the developer unit. Visually check the pressure contact and the lock state. • Check the high voltage output. Simulation No. 44-11. NO: –650V PH: –440V Simulation No. 8-1 DV BIAS: –215V • Developer stirring Simulation No. 25-1. Replace the developer.
			② Image density is too low to be corrected. (When executing simulation No. 44-6) Developer/toner density changes greatly. Humidity and temperature change greatly.	

[8] Simulation and diagnostics

1. Simulation

(1) Introduction

Simulation are used to do the following:

- To operate any functional block independently to check its function.
- To adjust the machine.
- To cancel troubles.
- To set up functions.

(2) Purpose

Simulation are used to help repair and adjust the machine.
When the PAUSE key is pressed in a course of a simulation being executed, the simulation is interrupted with the copy number window turned off and the copier becomes ready to accept entry of a simulation number.

*1: If the key was pressed for more than five seconds, it may not go into the simulation mode.

*2: Further operation may be needed depending on the kind of simulation.

*3: One of the next methods is required to cancel the simulation as it varies according to the simulation. The machine then starts from the state immediately after power on.

— Other than simulation 7
The simulation is canceled when the CLEAR ALL key is pressed.

— Simulation 7
One of the following operation cancels the simulation execution.

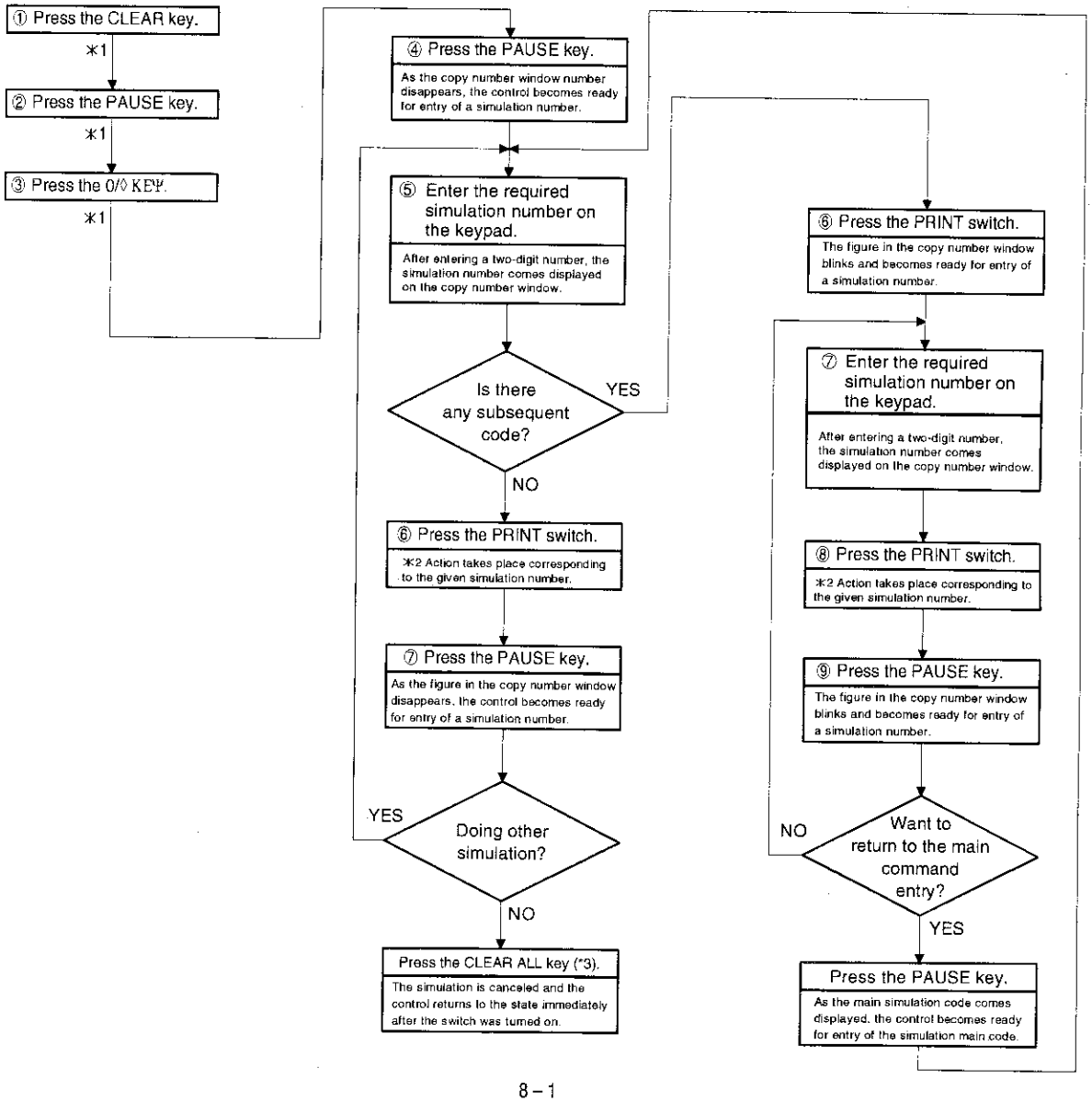
1. Power switch off.
2. Press the CLEAR → PAUSE → 0 → PAUSE → CLEAR ALL keys.

— Simulation 14
The simulation 14 is used to clear the memory contents (H2, H3, H4) that have been stored. After the simulation 14 has been executed, the diagnostic is automatically terminated.

— Special keys
CLEAR ALL key: Simulation mode → normal mode.
PAUSE key: Execution of simulation is interrupted.
CLEAR key: Clears the copy number window.

— The diagnostic is automatically terminated after the doorswitch operation "ON → OFF → ON", except "H" and "U2" code.

(3) Simulation execution procedure

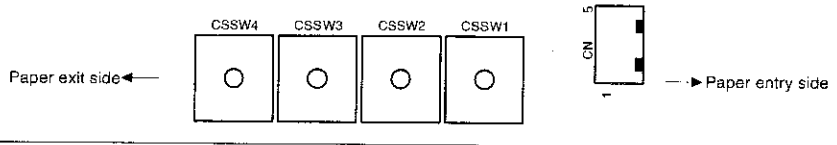

① Press the CLEAR key.
*1
② Press the PAUSE key.
*1
③ Press the 0/◊ KEY.
*1
④ Press the PAUSE key.
As the copy number window number disappears, the control becomes ready for entry of a simulation number.
⑤ Enter the required simulation number on the keypad.
After entering a two-digit number, the simulation number comes displayed on the copy number window.
Is there any subsequent code?
YES
NO
⑥ Press the PRINT switch.
*2 Action takes place corresponding to the given simulation number.
⑦ Press the PAUSE key.
As the figure in the copy number window disappears, the control becomes ready for entry of a simulation number.
YES
Doing other simulation?
NO
Press the CLEAR ALL key (*3).
The simulation is canceled and the control returns to the state immediately after the switch was turned on.
⑥ Press the PRINT switch.
The figure in the copy number window blinks and becomes ready for entry of a simulation number.
⑦ Enter the required simulation number on the keypad.
After entering a two-digit number, the simulation number comes displayed on the copy number window.
⑧ Press the PRINT switch.
*2 Action takes place corresponding to the given simulation number.
⑨ Press the PAUSE key.
The figure in the copy number window blinks and becomes ready for entry of a simulation number.
NO
Want to return to the main command entry?
YES
Press the PAUSE key.
As the main simulation code comes displayed, the control becomes ready for entry of the simulation main code.

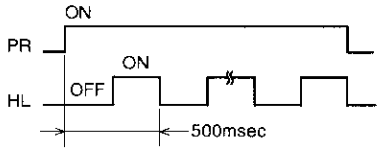
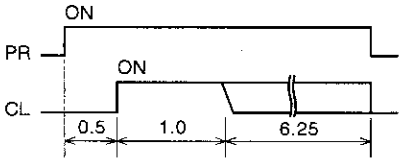
List of the test commands

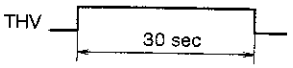
Sim. NO	Sim. SUB	Description	
01	01	Optical system mirror scanning check	
	02	Optical system sensor state display	
	03	Lens movement operation check	
	04	Lens aging	
02	01	RADF aging	
	02	RADF sensor state display	
	03	RADF individual load operation check	Motor A forward rotation
	04		Motor A reverse rotation
	05		Motor B forward rotation
	06		Motor B reverse rotation
	07		Belt clutch
	08		Paper feed solenoid
	09		Reverse solenoid
	10		Stopper solenoid
	11		Brake clutch
03	02	Sorter sensor state display	
	03	Sorter individual load operation check	Transport motor
	04		Bin shift motor
	05		Fan motor (SF-S15 only)
	06		Gate solenoid
	08		Staple motor (SF-S53 only)
	09		Paper hold solenoid (SF-S53 only)
	10		Guide bar motor (SF-S53 only)
04	02	Desk sensor state display	
	03	1st cassette slot, cassette size switch check (Desk)	
	04	2nd cassette slot, cassette size switch check (Desk)	
	05	3rd cassette slot, cassette size switch check (Desk)	
	06	Desk individual load operation check	Transport motor
	07		1st cassette slot, lift-up motor
	08		2nd cassette slot, lift-up motor
	09		3rd cassette slot, lift-up motor
	10		Transport clutch
	11		1st cassette slot, paper feed solenoid
	12		1st cassette slot, paper feed clutch
	13		2nd cassette slot, paper feed solenoid
	14		2nd cassette slot, paper feed clutch
	15		3rd cassette slot, paper feed solenoid
	16		3rd cassette slot, paper feed clutch
05	01	Operation panel display check	
	02	Fuser lamp check	
	03	Copy lamp check	
	04	BL/DL check	
06	02	Separation pawl solenoid operation check	
07	01	Warm-up time display and aging with jam detection	
	04	Warm-up disabled	
	06	Intermittent aging	
	07	Intermittent aging without jam	
08	01	Developer bias check	
	02	MHV (Charge), grid check	ME
	03		Photo
	04		TSM
	06	THV (Transfer) check	
	07	SHV (Separation) check	
09	02	ADU sensor state display	
	03	ADU trail edge plate aging	
	04	ADU alignment plate aging	
	05	Gate solenoid operation check	
10	**	Toner motor aging	
14	**	Cancel of troubles except U2, H2, H3, H4	
16	**	Cancel of U2 trouble code	
17	**	PF trouble cancel	
20	**	Maintenance counter clear	
21	01	Maintenance cycle setting	
	02	Setting of domestic mini maintenance for black copy kit	

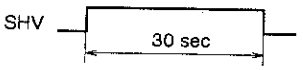
Sim. NO	Sim. SUB	Description	
22	01	Maintenance counter display	
	02	Maintenance preset counter display	
	03	Jam memory display	
	04	Total jam counter display	
	05	Total counter display	
	06	Developer counter display	
	07	Developer preset cycle counter display	
	08	RADF counter display	
	09	ADU counter display	
	10	Staple counter display	
	11	Developer adjustment time display	
	12	Drum adjustment time display	
	13	Key operator code display	
	14	ROM version display	
	15	Trouble memory display	
	16	Cassette paper feed counter display	
24	01	Jam memory/total jam counter clear	
	03	Duplex counter clear	
	04	ADF/RADF counter clear	
	05	Staple counter clear	
	06	Developer adjustment time clear	
	07	Drum adjustment time clear	
	08	Cassette paper feed counter clear	
25	01	Main motor system ON, toner sensor output display	
	02	Auto developer adjustment	
	06	Toner control A counter value setting	
	07	Grid correction setting for toner control A	
26	01	Option setting	
	03	Coin vendor setting	
	05	Counter mode setting	
	06	Destination setting	
	07	Drum sensitivity setting	
	08	Lens focus setting	
	09	4/5 mirror characteristics setting	
	10	AE original density setting	
27	01	PPC communication trouble	
30	01	Paper sensor state display	
	02	Cassette size switch state display	
42	**	Developer counter clear	
43	**	Fusing temperature setting	
44	01	Correction mode setting,	
	02	Drum mark sensor sensitivity adjustment	
	03	Image density sensor sensitivity adjustment	
	05	Test mode	
	06	Compulsory execution of process control	
	07	Drum mark sensor/image density sensor gain select check	
	09	Process control data display	
	11	Enters the copy aging mode to allow the following operation and setting.	
	12	Copying is performed without process control.	
46	01	Exposure level adjustment	
47	**	AE sensor characteristics setting	
48	01	Front/rear magnification ratio adjustment, focus adjustment	
	02	Paper transport direction magnification ratio adjustment (scanner speed)	
50	01	Lead edge image position adjustment, lead edge void adjustment (Calculation)	
	02	Lead edge image position adjustment, lead edge void adjustment (Measurement)	
51	02	Paper buckle adjustment	
52	01	ADU alignment plate adjustment value setting	
	02	ADU trail edge plate adjustment value setting	
	03	ADU drive clutch OFF time setting	
53	01	RADF stop position adjustment	Normal paper, Single copy
	02		Normal paper, Duplex copy
	03		Thin paper, Single copy
	04		Thin paper, Duplex copy
	05	RADF resist sensor adjustment	
	06	RADF timing sensor adjustment	
	07	RADF repulsion sensor adjustment	
	08	RADF empty sensor adjustment	

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>01</td><td>01</td><td>This is the test command used to test the optical system. The mirror base automatically starts to scan.
(1) With depression of the PAUSE key, the control moves from the test command mode to be ready to execute it. The READY pilot lamp (RPL) comes active with the zoom ratio at 100%. It is possible to change the zoom mode using the ZOOM key.
(2) When the PRINT key is pressed while the RPL is active, the status lamp turns off and the test command starts to execute. The mirror base moves to scan in the zoom ratio at that time.
(3) If the door is opened while the operation is in process, the operation is interrupted with status "CH" prompted. Closing the door will start the operation all over again from its initial step.</td><td></td></tr>
<tr><td></td><td>02</td><td>This is the test command used to test the optical system sensors. When the test command starts and the sensor turns on and the display reverses, it starts to test the on/off action of a optical system sensor.
<table><tr><th></th><th>Active status lamp</th></tr><tr><td>RE</td><td>Mirror rotary encoder pulse (RE) input</td></tr><tr><td>MHPS</td><td>Mirror home position sensor</td></tr><tr><td>LHPS</td><td>Lens home position sensor</td></tr><tr><td>MPHPS</td><td>No.4/5 mirror home position sensor</td></tr></table></td><td></td></tr>
<tr><td></td><td>03</td><td>Used to test the zoom lens movement.
• The zoom ratio is displayed on the zoom ratio window.
AB series machine 100% → 50% → 70% → 81% → 86% → 115% → 122% → 141% → 200% →
Inch series machine 100% → 50% → 64% → 77% → 95% → 121% → 129% → 141% → 200% →</td><td></td></tr>
<tr><td></td><td>04</td><td>Used to test the zoom lens in the aging test mode.
• Test command 01-03 are repeated to test.</td><td></td></tr>
<tr><td>02</td><td>01</td><td>Used to test the action of the RADF. The aging test starts when the document presence sensor is manually turned on.</td><td></td></tr>
<tr><td></td><td>02</td><td>This is the test command used to test RADF sensors. On/off state of sensor can be manually tested. When the sensor turns on, the display reverses.
<table><tr><td>Sensing presence of document
DSD</td><td>Sensing DF block open/close
AUOD</td><td>Sensing document width
DWS1</td></tr><tr><td>Sensing pre-fed document
DFD</td><td>Sensing paper feed block open/close
FGOD</td><td>Sensing document width
DWS2</td></tr><tr><td>Sensing document release
RDD</td><td>Sensing paper inversion block open/close
TGOD</td><td>Sensing document width
DSW3</td></tr><tr><td></td><td></td><td>Sensing document width
DSW4</td></tr><tr><td>Sensing document width
DWS</td><td></td><td>Sensing document length
DLS1</td></tr><tr><td></td><td></td><td>Sensing document length
DLS2</td></tr></table>Reverse display: Paper presence/Door open, Normal display: No paper/Door closed</td><td></td></tr>
<tr><td></td><td>03</td><td>Used to test the action of RADF (individual load check)
Motor A forward rotation</td><td></td></tr>
<tr><td></td><td>04</td><td>Motor A revere rotation</td><td></td></tr>
<tr><td></td><td>05</td><td>Motor B forward rotation</td><td></td></tr>
<tr><td></td><td>06</td><td>Motor B revere rotation</td><td></td></tr>
<tr><td></td><td>07</td><td>Belt clutch</td><td></td></tr>
<tr><td></td><td>08</td><td>Paper feed solenoid</td><td></td></tr>
<tr><td></td><td>09</td><td>Inversion solenoid</td><td></td></tr>
<tr><td></td><td>10</td><td>Shutter solenoid</td><td></td></tr>
<tr><td></td><td>11</td><td>Brake clutch</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table>

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>03</td><td>02</td><td>This is the test command used to test the sensors in the sorter.
On/off state of sensors can be manually tested.
When the sensor turns on, the display reverses.
<table>
<tr><td>Paper entry sense (non-sort)
PES/SPID</td><td>Indexer upper limit sense
IULS/—</td><td>Sorter set sense
SJS/JSW</td></tr>
<tr><td>Paper entry sense (sort)
—/SPPD</td><td>Indexer lower limit sense
ILLS/—</td><td>Top cover open/close sense
UCSW/—</td></tr>
<tr><td>Paper out sense
PWB-S/—</td><td>Indexer (bin) home sense
IHS/BHPS</td><td>Blower cover open/close sense
FCSW/—</td></tr>
<tr><td>Bin paper sense
—/BPED</td><td>Indexer (bin) position sensor
IPS/LCHPS</td><td>Staple cover open/close sense
—/SCSW</td></tr>
<tr><td>Staple position paper sense
—/SPED</td><td>Guide bar home position sense
—/SGHPS</td><td>Staple unit home position sense
—/SCS</td></tr>
<tr><td>Staple unit position sense
—/SSD</td><td>Staple operation home position sesnse
—/SHPS</td><td>Stapler needle sense
—/SED</td></tr>
</table>
Note: The signal names are given in the order of S15/S53.
Reverse display: paper found/door opened/ON
Normal display: no paper found/door closed/OFF</td><td></td></tr>
<tr><td></td><td>03</td><td>Used to test the components of the sorter (individual load check).
Transport motor rotation</td><td></td></tr>
<tr><td></td><td>04</td><td>Indexer motor rotation (returns to the home position at first, then stops at each bin location Bin 1 to Bin 21, moving up and down. Sorter bin moving.</td><td></td></tr>
<tr><td></td><td>05</td><td>Fan motor rotation in the case of SF-S15 only</td><td></td></tr>
<tr><td></td><td>06</td><td>Gate solenoid ON</td><td></td></tr>
<tr><td></td><td>07</td><td>Offset solenoid (in the case of SF-S53)</td><td></td></tr>
<tr><td></td><td>08</td><td>Stapler motor rotation (the paper is stapled once when there is a paper in the stapler tray). (SF-S53 only)</td><td></td></tr>
<tr><td></td><td>09</td><td>Paper holder solenoid operation check (SF-S53 only)</td><td></td></tr>
<tr><td></td><td>10</td><td>Guide motor operation check</td><td></td></tr>
<tr><td>04</td><td>02</td><td>This is the test command used to test sensors in the desk. On/off state of the sensors can be manually tested.
When a sensor turns on, the display reverses.
<table>
<tr><td>Sensing paper fed from the upper cassette
DPOD1</td><td>Upper cassette lift upper limit sensor
DLUD1</td><td>Sensing paper presence on the upper cassette
DPE1</td></tr>
<tr><td>Sensing paper fed from the middle cassette
DPOD2</td><td>Middle cassette lift upper limit sensor
DLUS2</td><td>Sensing paper presence on the middle cassette
DPE2</td></tr>
<tr><td>Sensing paper fed from the bottom cassette
DPOD3</td><td>Bottom cassette lift upper limit sensor
DLUD3</td><td>Sensing paper presence on the bottom cassette
DPE3</td></tr>
<tr><td>Sensing door close/open
DDOP</td><td>—</td><td>—</td></tr>
</table>
Reverse display: paper found/door opened/ON
Normal display: no paper found/door closed/OFF</td><td></td></tr>
<tr><td></td><td>03</td><td>Used to test the on/off state of the first cassette size switch of the desk.
When the switch turns on, the display reverses.
(Cassette size board)
Switch positions when viewed from the front frame
 
</td><td></td></tr>
<tr><td></td><td>04</td><td>Used to test the on/off state of the second cassette size switch of the desk. Function is identical to the test command 04-03.</td><td></td></tr>
<tr><td></td><td>05</td><td>Used to test the on/off state of the third cassette size switch of the desk. Function is identical to the test command 04-03.</td><td></td></tr>
</table>

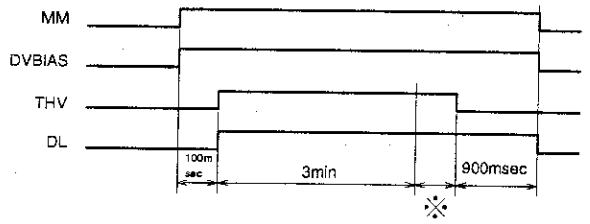
Main code	Sub code	Description	Ref. Page
04	06	Transport motor rotation. (Desk)	
	07	Motor turns off when detected the upper limit of the first cassette lift up motor rotation. (Desk).	
	08	Motor turns off when detected the upper limit of the second cassette lift up motor rotation. (Desk)	
	09	Motor turns off when detected the upper limit of the third cassette lift up motor rotation. (Desk)	
	10	Activate transport clutch of the desk	
	11	Activate first cassette paper feed solenoid of the desk	
	12	Activate paper feed clutch of the first cassette of the desk	
	13	Activate second cassette paper feed solenoid of the desk	
	14	Activate paper feed clutch of the second cassette of the desk	
	15	Activate third cassette paper feed solenoid of the desk	
	16	Activate paper feed clutch of the third cassette of the desk	
05	01	All LED's on the operation panel are turned on for one minute. After one minute, the machine automatically goes into the sub code input wait state.	
	02	This is the test command used to test the heater lamp. Heater lamp turned on and off five times.  The heater turns on and off in the order shown above.	
	03	This is the test command used to test the copy lamp. Copy lamp turned on in the following order. When the test command starts, the copy lamp turns full power for one second with the manual exposure setting 3.0 shown, and the copy lamp intensity can be changed to the power set on the exposure setup key for a period of 6.25 seconds.  Use care not to damage original cover or RADF belt. * Refrain from repeating this test command without waiting for lamp and glass to cool.	
	04	This is the test command used to check activation of the discharge lamp (DL) and the blank lamps (BL). The discharge lamp (DL) turns on for 30 seconds. Each blank lamp turns on, from the front frame side to the rear frame side. Finally, all blank lamps turn on. After lighting, the machine automatically goes into the sub code input wait state.	
06	02	Activation of the separation solenoid Used to test the action of the drum separator pawl solenoid.	
07	01	Aging test with alert for paper misfeed 1. Used to check the warmup time. 2. Executes the continuing aging test for the given number of copies. When the test command is executed. the machine performs its normal action and the warmup time starts to count from zero and increase count every one second. The count is displayed on the copy lamp window. When the RPL is turned on, the addition of the copy number is interrupted with the copy number remaining on display as it is. When the CLEAR key is pressed, the copy number must be entered on the keypad, and with depression of the PRINT switch, the given number of copies repeated to produce. In this case, the paper misfeed function comes alive.	

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>08</td><td>01</td><td>Developing bias voltage output. After delivering the output, the machine automatically goes into the sub code input wait state.
This is the test command used to check the developing bias voltage. The developing bias voltage is turned on for 30 seconds.
Standard developing bias setting is –215±10V.</td><td>[7]-2(3)</td></tr>
<tr><td></td><td>02</td><td>Main (charge) corona output [ME]. After delivering the output, the machine automatically goes into the sub code input wait state.
Standard manual exposure mode main corona grid voltage is –650±5V.
This is the test command used to check the main corona variance between the front and rear sides. The corona output continues for 30 seconds.
• The main corona variance must be within 8μA between the front and the rear.</td><td>[7]-5-(D)</td></tr>
<tr><td></td><td>03</td><td>Main corona output [PE]. After delivering the output, the machine automatically goes into the sub code input wait state.
Standard photographic mode main corona grid voltage is –440±5V.</td><td>[7]-5-(D)</td></tr>
<tr><td></td><td>04</td><td>Main corona output [TSM]. After delivering the output, the machine automatically goes into the sub code input wait state.
Standard TSM main corona grid voltage is –550V±5V.</td><td>[7]-5-(D)</td></tr>
<tr><td></td><td>06</td><td>Transfer corona output [TSM]. After delivering the output, the machine automatically goes into the sub code input wait state.
This is the test command used to check the transfer corona output (THV). The transfer corona output continues for 30 seconds.
 

Standard transfer corona output is –42±4μA (F/R difference: Max. 5μA).</td><td>[7]-4-(B)</td></tr>
<tr><td></td><td>07</td><td>Separation corona output. After delivering the output, the machine automatically goes into the sub code input wait state.
This is the test command used to check the separation corona output (SHV). The separation corona output continues for 30 seconds.
 

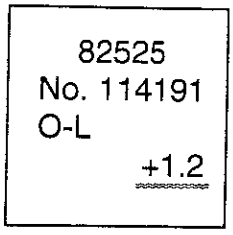
Standard separation corona output is 0±10 V.</td><td>[7]-6-(E)</td></tr>
<tr><td>09</td><td>02</td><td>ADU sensor check test command ON/OFF state of each sensor can be manually checked.
When the sensor turns on, the display reverses.
<table><tr><th>Sensor</th><th>Function</th></tr><tr><td>DPPD1</td><td>ADU transport sensor 1</td></tr><tr><td>DPPD2</td><td>ADU transport sensor 2</td></tr><tr><td>DTPID</td><td>ADU tray sensor</td></tr><tr><td>DPFD</td><td>ADU tray out sensor</td></tr><tr><td>APHPS1</td><td>ADU alignment plate home position sensor</td></tr><tr><td>APHPS2</td><td>ADU rear edge plate home position sensor</td></tr></table></td><td></td></tr>
<tr><td></td><td>03</td><td>ADU trail edge plate drive motor rotation
• Used to check the trail edge plate movement
(AB series)
HP.A3 → B4 → A4R → B5R → A4 → B5 → A5
(Inch series)
HP.11" x 17" → 11" x 14" → 8½" x 11"(R) → 8½" x 11"</td><td></td></tr>
<tr><td></td><td>04</td><td>ADU alignment plate drive motor rotation
• Used check the alignment plate movement
(AB series)
HP.A3 → B4 → A4R → B5R → A4 → B5 → A5
(Inch series)
HP.11" x 17" → 11" x 14" → 8½" x 11"(R) → 8½" x 11"</td><td></td></tr>
<tr><td></td><td>05</td><td>Gate solenoid activation
Used to check the gate solenoid operation.</td><td></td></tr>
</table>

Main code	Sub code	Description	Ref. Page
10	—	Toner motor activation Used to check the toner motor activation.	
14	—	Trouble code cancellation This is the test command used to cancel other than the "U2" trouble (H2, H3, H4). After the trouble has been removed, the test command terminates.	
16	—	U2 trouble code cancellation This is the test command used to cancel the "U2" trouble code. After the trouble code has been removed, the test command terminates.	
17	—	PF trouble cancel Used to cancel the PF trouble in the machine with PC/Modem when the copy inhibition command from the host machine is received. After cancelling the trouble, the test command is automatically cancelled.	
20	—	Maintenance counter clear Used to reset the maintenance preset counter to zero after the maintenance is completed. It is mandatory to clear the counter after the maintenance is completed.	
21	01	◦ Maintenance cycle setting Used to set the maintenance cycle. Code — Maintenance cycle 0 ····· 80,000 sheets 1 ····· 5,000 sheets 2 ····· 10,000 sheets 3 ····· 20,000 sheets 4 ····· 40,000 sheets 5 ····· None The default is 0.	
22	01	◦ Maintenance counter display Copy number of the maintenance counter is displayed.	
	02	◦ Maintenance preset counter display This test command is used to check the contents of the maintenance preset cycle counter.	
	03	◦ JAM memory display (JAM map display) Displays the causes (positions) of JAM occurred in copy operation. To check the history of JAM cause, press the message forward feed key.	
	04	◦ Total misfeed counter display	
	05	◦ Total counter display This counter is used to show the total copy number of the machine.	
	06	◦ Developer counter display The contents of the copy number counter of the installed developing unit is displayed.	
	07	◦ Developer preset cycle counter display Number of developer replacements and the reset counter contents of the installed developing unit are displayed.	
	08	◦ RADF counter display Used to check the number of originals fed through the RADF.	
	09	◦ Duplex counter display Used to check the number of sheets fed through the duplex unit.	
	10	◦ Staple counter display Used to check the number of use of the staple unit.	
	11	◦ Developer adjustment time display Used to check the correction level according to the developer rotating time.	
	12	◦ Drum adjustment time display Used to check the correction level according to the drum rotating time.	
	13	◦ Key operator code display Used to check the key operator code registered voluntarily by the key operator.	
	14	◦ ROM version display Used to display the version of ROM which is currently installed.	
	15	◦ Trouble memory display Used to display the number of troubles occurred and the trouble codes up to 50 cases from the latest one.	
	16	◦ Cassette paper feed counter display Used to check the counter value of each cassette.	

Main code	Sub code	Description	Ref. Page
24	01	◦ Misfeed map memory and total misfeed counter clear	
	03	◦ RADF counter clear The contents of the copy number counter is reset for the RADF. It is mandatory to clear the memory contents after the maintenance is completed.	
	04	◦ Duplex counter clear The contents of the copy number counter is reset to the duplex unit. It is mandatory to clear the memory contents after the maintenance is completed.	
	05	◦ Staple counter clear The staple unit using counter is cleared to zero.	
	06	◦ Developer adjustment time clear The developer adjustment time is cleared to zero.	
	07	◦ Drum adjustment time clear The drum adjustment time is cleared to zero.	
	08	◦ Tray paper feed counter clear Used to clear the tray paper feed counter.	
25	01	Main motor activation • Used to check malfunction in the main motor drive train. (Rotates for 3 min.) • Also, monitors the toner density sensor. (Sensor output value display) C → =J → 0 → =J → 2 → 5 → PSW → 1 → PSW	
	02	Automatic developer adjustment • This is the test command used to monitor the toner sensor and to automatically set the developer. • For automatically setting developer, the developing tank is stirred and the toner sensor output is monitored. The sensor is monitored 16 times in 3 minutes after the stirring started and the mean value is stored in the memory as the toner density referance value. (See the area marked with an asterisk in the figure below.) (Afterwards, referance changes as copies are made to maintain density.)  C → =J → 0 → =J → 2 → 5 → PSW → 2 → PSW	
26	01	Option unit setup • Used to set up option unit. ① When the test command is executed, the presently stored machine setup code is displayed with the READY lamp turned on. ② After the READY lamp has turned on, enter an appropriate setup code on the keypad and press the PRINT switch. Then, the date is stored in the memory and the READY lamp turns off. Code / Option: +1 RADF; +2 ADU; +4 Desk; +10 Sorter ◦ No need to set "+2 (ADU)". If the ADU is installed, "2" is automatically added. ◦ Used to set the code that corresponds to an option unit. (EX): To set the RADF and desk together with ADU, enter 1+2+4=7, or 1+4=5. NOTES: (1) Be sure to enter the code that corresponds to the installed option unit. (2) If option setup is incorrect, a trouble code is displayed. See the trouble code chart.	
	03	Coin vendor setting 0: Cancel, 1: Setting	

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>26</td><td>05</td><td>Counter mode setup
① When the test command is executed, the code of the presently stored mode is displayed with the READY lamp turned on.
② After the READY lamp has turned on, enter an appropriate setup code on the keypad and press the PRINT switch. Then, the code is stored in the memory and the READY lamp turns off.
<table>
<tr><th>Code</th><th>Total counter</th><th>Maintenance counter</th></tr>
<tr><td>0</td><td>Double count</td><td>Double count</td></tr>
<tr><td>1</td><td>Single count</td><td>Double count</td></tr>
<tr><td>2</td><td>Double count</td><td>Single count</td></tr>
<tr><td>3</td><td>Single count</td><td>Single count</td></tr>
</table></td><td></td></tr>
<tr><td></td><td>06</td><td>Destination setup
Used to set the destination setting.
① When the test command is executed, the presently stored model number and the destination code are displayed (see table below) and the READY lamp turns on.
② After the READY lamp has turned on, enter the model number and the destination code on the keypad and press the PRINT switch to store the setting in the memory. The READY lamp then turns off.
<table>
<tr><th>Code</th><th>Destination</th><th>AB/Inch</th></tr>
<tr><td>0</td><td>SEC (ES) America</td><td rowspan="4">(Inch)</td></tr>
<tr><td>1</td><td>SEC * America</td></tr>
<tr><td>2</td><td>SECL Canada</td></tr>
<tr><td>3</td><td>Other</td></tr>
<tr><td>4</td><td>Japan</td><td rowspan="2">(AB Japan)</td></tr>
<tr><td>5</td><td>Other</td></tr>
<tr><td>6</td><td>SEEG German</td><td rowspan="4">(AB Export)</td></tr>
<tr><td>7</td><td>SUK U.K.</td></tr>
<tr><td>8</td><td>SCA Australia</td></tr>
<tr><td>9</td><td>Other</td></tr>
</table>
* Energy star</td><td></td></tr>
<tr><td></td><td>07</td><td>Drum sensitivity setup
① When the test command is executed, the number stored in the memory is recalled and the READY lamp turns on.
② A number 1 to 3 may be entered on the keypad while the RPL is active.
③ Press the PRINT switch after the number has been entered. With this, the READY lamp turns off and the test command number is displayed.
° Drum
<table>
<tr><td>Keypad entry</td><td>1</td><td>2</td><td>3</td></tr>
<tr><td>Sensitivity</td><td>1</td><td>2</td><td>3</td></tr>
</table></td><td></td></tr>
<tr><td></td><td>08</td><td>Lens characteristics entry (at a time of lens replacement)
Because each lens has a variance in focal distance, the lens moving distance in any zoom mode must correspond with the focal distance of the lens. The zoom ratio varies proportionate to the variance of the lens focal distance.
To avoid focus problem, the class of the lens focal distance (refer to chart on page 7-11) is stored in the memory using the test command. In a variable zoom mode, the lens moving distance that corresponds to the lens focal distance is obtained on the basis of the data so as to produce the accurate zoom copy.
Setup method (26-08)
① When the test command is executed, the presently stored preset code is displayed and the READY lamp turns on.
② After the READY lamp turned on, enter the lens number shown on the top of lens area and press the PRINT switch to store the value in the memory. The READY lamp now turns off.
[C] → [=↵] → [0/◊] → [=↵] → [2] → [6] → [PSW] → [8] → [PSW] → [1] → [4] → [PSW]</td><td>[7]-10-(6)</td></tr>
</table>

Main code	Sub code	Description	Ref. Page
26	09	4/5 mirror characteristics entry (at a time of lens replacement) (Setup method (26-09) ① Set the correction value for lens marked value based on "lens value vs. test command input." Press [C] → [=⌟] → [0/◊] → [=⌟] → [2] → [6] → [PSW] → [9] → [PSW] keys to execute the test command 26-09. As the READY lamp turns on, the previously set value 1 to 21) is shown. ② Enter the new value on the keypad. EX: If the value shown on the lens is +1, 2, pick up "14." Press the [1] → [4] → [PSW] keys. A figure 0 to L is shown on the lens value label.	[7]-3-(6)



Value shown on the label	Test command 48-01	Test command 48-01 [=⌟]	Test command 26-09 Zoom correction (No.4/5 mirror)	Test command 26-08 Zoom correction (lens)
+4.0	10	20	21	21
3.9	11	21		
3.8	12	22		
3.7	13	22	20	20
3.6	14	22		
3.5	15	23		
3.4	16	23		
3.3	17	24	19	19
3.2	18	24		
3.1	19	25		
3.0	20	25		
2.9	21	26	18	18
2.8	22	26		
2.7	23	27		
2.6	24	27		
2.5	25	28	17	17
2.4	26	28		
2.3	27	29		
2.2	28	29		
2.1	29	30	16	16
2.0	30	30		
1.9	31	31		
1.8	32	31		
1.7	33	32	15	15
1.6	34	32		
1.5	35	33		
1.4	36	33		
1.3	37	34	14	14
1.2	38	34		
1.1	39	35		
1.0	40	35		
0.9	41	36	13	13
0.8	42	36		
0.7	43	37		
0.6	44	37		

Main code	Sub code	Description	Ref. Page
26	09		

Value shown on the label	Test command 48-01	Test command 48-01 =↵	Test command 26-09 Zoom correction (No.4/5 mirror)	Test command 26-08 Zoom correction (lens)
0.5	45	38	12	12
0.4	46	38		
0.3	47	39		
0.2	48	39		
+0.1	49	40	11	11
0	50	40		
–0.1	51	40		
0.2	52	41	10	10
0.3	53	41		
0.4	54	42		
0.5	55	42		
0.6	56	43	9	9
0.7	57	43		
0.8	58	44		
0.9	59	44		
1.0	60	45	8	8
1.1	61	45		
1.2	62	46		
1.3	63	46		
1.4	64	47	7	7
1.5	65	47		
1.6	66	48		
1.7	67	48		
1.8	68	49	6	6
1.9	69	49		
2.0	70	50		
2.1	71	50		
2.2	72	51	5	5
2.3	73	51		
2.4	74	52		
2.5	75	52		
2.6	76	53	4	4
2.7	77	53		
2.8	78	54		
2.9	79	54		
3.0	80	55	3	3
3.1	81	55		
3.2	82	56		
3.3	83	56		
3.4	84	57	2	2
3.5	85	57		
3.6	86	58		
3.7	87	58		
3.8	88	59	1	1
3.9	89	59		
–4.0	90	60		

	10	AE original density setting Used to set the original density. (Set value: 1 ~ 9) Default: 2 Set to 9 if the density is extremely low.	
27	01	PPC communication trouble	

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>30</td><td>01</td><td>Monitoring main unit paper sensor
Used to check the on/off state of paper sensor in the copier.
When the sensor turns on, the display reverses.</td><td></td></tr>
<tr><td></td><td>02</td><td>Monitoring paper cassette size
Used to check the on/off state of paper cassette size. When the switch turns on, the display reverses.</td><td></td></tr>
<tr><td>42</td><td>*</td><td>° Developer counter clear
Reset the contents of the copy number counter of the installed developing unit.</td><td></td></tr>
<tr><td>43</td><td>*</td><td>When main code "43" is entered, the following message is displayed on the LCD.
° Fusing temperature setting
Used to set the fusing temperature.
When this simulation is executed, the currently set fusing temperature is displayed.
Press the message forward scroll key under this state to change the fusing temperature by 5 degrees.
[1 → 1, 2 → 1] 1 2 3 4 5 6 7 8 9 0 SCROLL KEY → [1 → 2, 2 → 2] 1 2 3 4 5 6 7 8 9 0
<table><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>0</td></tr><tr><td>160</td><td>165</td><td>170</td><td>175</td><td>180</td><td>185</td><td>190</td><td>195</td><td>200</td><td>205</td></tr></table></td><td></td></tr>
<tr><td>44</td><td>01</td><td>Correction mode setting
[+ 1] Process control correction enable
[+ 2] Optical dirt correction enable
[+ 4] Drum layer wear correction enable
[+10] Toner control A correction valid
[+20] Toner control B correction valid
Note: When all are "Enable," set to 37.
The corrections, except for the process control correction mode, can be disabled in the normal copy mode. When "0" is inputted, "1" (Process control correction) is enabled. (Automatic setting)</td><td></td></tr>
<tr><td></td><td>02</td><td>Drum mark sensor sensitivity adjustment : 0 ~ 255 255=5V
For the drum mark sensor gain rank, [2] is selected.
The main motor rotates and the drum mark sensor sensing level is displayed on the multi-display section. Adjust VR1 in the process unit to obtain [204±10].</td><td></td></tr>
<tr><td></td><td>03</td><td>Image density sensor sensitivity adjustment : 0 ~ 255 255=5V
For the image density sensor gain rank, [2] is selected.
The main motor rotates and the image density sensor sensing level is displayed on the multi-display section. Adjust VR2 in the process unit to obtain [204±10].</td><td></td></tr>
<tr><td></td><td>05</td><td>Test mode
The main motor rotates to form images in nine steps of the grid bias level from 350V to 590V (30V step) on the drum, and the image density sensor level is displayed on the LCD.
Display
45, 50, 55, 60, 65, 70
75, 80, 85
45: Ratio of reflection between toner patch and base at grid bias voltage of 450V
50: Ratio of reflection between toner patch and base at grid bias voltage of 500V
55: Ratio of reflection between toner patch and base at grid bias voltage of 550V
60: Ratio of reflection between toner patch and base at grid bias voltage of 600V
65: Ratio of reflection between toner patch and base at grid bias voltage of 650V
70: Ratio of reflection between toner patch and base at grid bias voltage of 700V
75: Ratio of reflection between toner patch and base at grid bias voltage of 750V
80: Ratio of reflection between toner patch and base at grid bias voltage of 800V
85: Ratio of reflection between toner patch and base at grid bias voltage of 850V</td><td></td></tr>
</table>

Main code	Sub code	Description	Ref. Page
44	06	Compulsory execution of process control	

NORM	(****)	T/S	(****)
DM_G	(*)	PHOT	(****)

GB_A	(****)	TARG	(****)
ID_G	(*)	I*m*n	(****)

PAT1	(***)	BAS1	(***)
PAT2	(***)	BAS2	(***)

PAT3	(***)	BAS3	(***)
MARK	(***)	MARB	(***)

I	(***)	m	(***)	n	(***)
M1	(***)	M2	(***)		

Compulsory execution of half-tone density correction

NORM	NORMAL	:	Standard mode grid bias (350 - 1150V)
T/S	T/S	:	Toner save mode grid bias (350 - 1150V)
PHOT	PHOTO	:	Photo mode grid bias (350 - 1150V)
GB_A	GB ADJUST	:	Grid bias correction value after measurement (±0 ~ 999V)
TARG	TARGET	:	Patch/foundation, standard patch value when foundation is 255 (255= foundation)
ID_G	ID GAIN	:	Image density sensor gain rank in execution (1 ~ 7)
MARK	MARK	:	Drum mark sensor mark level in execution (0 ~ 255, 255=5V)
MARB	MARK B	:	Drum mark sensor surface level in execution (0 ~ 255, 255=5V)
DM_G	DM GAIN	:	Drum mark sensor gain rank in execution (1 ~ 7)
BAS1, 2, 3	BASE1, 2, 3	:	Drum surface image density sensor level in execution (0 ~ 255, 255=5V)
PAT1, 2, 3	PATCH1, 2, 3	:	Toner patch image density sensor level in execution (0 ~ 255, 255=5V)
I	I	:	Vg correction coefficient
m	m	:	Dirt correction coefficient
n	n	:	Film wear correction coefficient
M1	M1	:	Dirt correction coefficient (M1)
M2	M2	:	Dirt correction coefficient (M2)
I*m*n	I*m*n	:	Vc1 correction coefficient

	07	Drum mark sensor/image density sensor gain select check The image density sensor level can be checked for selection of each gain rank. : 0~255, 255 = 5V	

DM)	7 6 5 4 3 2 1
ID)	7 6 5 4 3 2 1

Since the max. difference in amplifier rates between two gains is 132%, supposing the max. sensor input is 4.8V, the gain rank is increased by +1 for 3.6V.

<table>
<tr><th>Main code</th><th>Sub code</th><th>Description</th><th>Ref. Page</th></tr>
<tr><td>44</td><td>09</td><td>Process control data display
NORM (****) T/S (****)
DM_G (*) PHOT (****)

GB_A (****) TARG (****)
ID_G (*) I*m*n (****)

PAT1 (***) BAS1 (***)
PAT2 (***) BAS2 (***)

PAT3 (***) BAS3 (***)
MARK (***) MARB (***)

I (***) m (***) n (***)
M1 (***) M2 (***)

Compulsory execution of half-tone density correction

<table>
<tr><td>NORM</td><td>NORMAL</td><td>:</td><td>Standard mode grid bias (350 ~ 1150V)</td></tr>
<tr><td>T/S</td><td>T/S</td><td>:</td><td>Toner save mode grid bias (350 ~ 1150V)</td></tr>
<tr><td>PHOT</td><td>PHOTO</td><td>:</td><td>Photo mode grid bias (350 ~ 11250V)</td></tr>
<tr><td>GB_A</td><td>GB ADJUST</td><td>:</td><td>Grid bias correction value after measurement (±0 ~ 999V)</td></tr>
<tr><td>TARG</td><td>TARGET</td><td>:</td><td>Patch/foundation, standard patch value when foundation is 255 (255= foundation)</td></tr>
<tr><td>ID_G</td><td>ID GAIN</td><td>:</td><td>Image density sensor gain rank in execution (1 ~ 7)</td></tr>
<tr><td>MARK</td><td>MARK</td><td>:</td><td>Drum mark sensor mark level in execution (0 ~ 255, 255=5V)</td></tr>
<tr><td>MARB</td><td>MARK B</td><td>:</td><td>Drum mark sensor surface level in execution (0 ~ 255, 255=5V)</td></tr>
<tr><td>DM_G</td><td>DM GAIN</td><td>:</td><td>Drum mark sensor gain rank in execution (1 ~ 7)</td></tr>
<tr><td>BAS1, 2, 3</td><td>BASE1, 2, 3</td><td>:</td><td>Drum surface image density sensor level in execution (0 ~ 255, 255=5V)</td></tr>
<tr><td>PAT1, 2, 3</td><td>PATCH1, 2, 3</td><td>:</td><td>Toner patch image density sensor level in execution (0 ~ 255, 255=5V)</td></tr>
<tr><td>I</td><td>I</td><td>:</td><td>Vg correction coefficient</td></tr>
<tr><td>m</td><td>m</td><td>:</td><td>Dirt correction coefficient</td></tr>
<tr><td>n</td><td>n</td><td>:</td><td>Film wear correction coefficient</td></tr>
<tr><td>M1</td><td>M1</td><td>:</td><td>Dirt correction coefficient (M1)</td></tr>
<tr><td>M2</td><td>M2</td><td>:</td><td>Dirt correction coefficient (M2)</td></tr>
<tr><td>I*m*n</td><td>I*m*n</td><td>:</td><td>Vc1 correction coefficient</td></tr>
</table></td><td></td></tr>
<tr><td></td><td>11</td><td>Enters the copy aging mode to allow the following operation and setting.
Display
25 85 100 105 PA ****
NO **** TS **** PH ****

<table>
<tr><td>PA</td><td>PATCH (–375±10V)</td></tr>
<tr><td>PH</td><td>PHOTO (–440±5V)</td></tr>
<tr><td>NO</td><td>NOMAL (–650±5V)</td></tr>
<tr><td>TS</td><td>T/S (–550±5V)</td></tr>
</table>
Use "→" key to select, and press PSW to determine. Aging is started.</td><td></td></tr>
<tr><td></td><td>12</td><td>Copying is made without process control operation. This simulation is used to know whether the trouble is in the process section or in the other section when F2 trouble occurs.</td><td></td></tr>
<tr><td>46</td><td>01</td><td>◦ Exposure level adjustment
Used to adjust the copy density and the copy density select level. Refer to adjustment section page 7-19.</td><td>[7]-5-(5)</td></tr>
</table>

Main code	Sub code	Description	Ref. Page
47	*	◦ AE sensor characteristics measurement AE sensor output characteristics memory (1) AE sensor output characteristics input Press the [C] → [=↵] → [0] → [=↵] → [4] → [7] → [PSW] keys. The mirror base is initialized, scans about 10cm, then stops. The READY lamp turns on now and becomes ready to measure. Press the PRINT switch. The copy lamp driving voltage changes in increments of 10V (20V) each from 80V (160V) to 30V (600V), and the AE sensor output characteristics are stored in the memory. The values are used as referances. NOTE: Shown in parenthesis is for the 200V series machine.	[7]-20-(3)
48	01	Front/rear direction zoom ratio adjustment (refer to [7]-3-(6)-9 for the lens type value. Used to set the No.4/5 mirror home position (focal adjustment) and to adjust the zoom ratio of the copy in the vertical direction (from front to rear). There are two kinds of test command 48-01 of which are described as follows. 1-1. Horizontal copy zoom ratio standard value input method (at a time the lens or main PWB replacement) Press the [C] → [=↵] → [0] → [=↵] → [4] → [8] → [PSW] → [➡] keys. The already set value or "40" is displayed. Substitute the value of "O.L" shown on the label attached to the lens with the formula value. 40 – [(value of O.L.) x 5] = standard value of correction Ex: 40 – (+1.2 x 5) = 34 1-2. Use this test command to adjust the horizontal zoom ratio. Change the value entered in "1-1" to change. 2-1. No.4/4 mirror home position standard value input (at a time of lens or main PWB replacement). Press the [C] → [=↵] → [0] → [=↵] → [4] → [8] → [PSW] [1] → [PSW] keys. The already stored value or "50" is displayed. Substitute the value of "O.L" shown on the label attached to the lens with the formula value. 42 – [(O.L value) x 10] = standard value of correction Ex: 50 – (+1.2 x 10) = 38 2-2. To adjust the resolution, change the value entered at "2-1" using this test command. When the No. 4/5 mirror reference value is "+" from the center value "50", the mirror is shifted away from the lens to lengthen the light path. When it is "–", the mirror is shifted to the lens to shorten the light path. The value is calculated in this manner. (Label) 82525 No. 114191 O-L +1.2	[7]-8-(1) -(3) [7]-8-(2) [7]-9-(4)
	02	◦ Paper moving direction zoom adjustment Used to adjust the zoom ratio in the landscape mode. Varying the mirror base moving speed adjusts the zoom factor in the landscape direction of the copy (paper moving direction). ① Place a scale over the original table in the direction the paper moves. Make a copy in the 100% zoom mode and obtain the copy zoom ratio correction factor. Copy zoom correction factor = (original size) – $\frac{\text{(copy image size)}}{\text{(original size)}} \times 100\%$ ② As the READY lamp turns on, the previously set figure between 15 and 35 is displayed. Change it with the copy zoom factor correction factor obtained in ①. (Input value) = (previously stored value) + copy zoom ratio correction factor [%] × 10 Press the PRINT switch after entering the input value. With this, the input value is stored in the memory and the READY lamp turns off.	[7]-10-(5)
50	01	Used to adjust the copy lead edge image loss and void areas. For more information, refer to the optical system copy lead edge adjustment procedure.	[7]-15-(11)
	02	The function of this test command is similar to the test command 50-01. The test command 50-02 allows easier lead edge adjustment using the values of L1 and L2. For more information, refer to the optical system copy lead edge adjustment procedure.	[7]-15-(11)

Main code	Sub code	Description	Ref. Page
51	02	◦ Resist roller adjustments Used to set the on timing of the paper feed roller (rate of buckie in the paper caused by the resist roller). When the test command is executed, the manual feed mode is automatically established. Change the manual feed mode resisting rate, cassette paper feed resist rate, and ADU paper feed resist rate independantly. Press the [C] → [=↵] → [0/0] → [=↵] → [5] → [1] → [PSW] → [2] → [PSW] → keys. The manual feed lamp turns on → ① Enter number → press the cassette key (main unit bottom cassette and pause lamp turn on) → ② enter number → press the cassette key (main unit bottom cassette lamp turns on) → ③ enter number → press the cassette key. ①: Manual feed paper resist rate adjustment (MALTI TRAY) ②: Cassette paper resist rate adjustment (TRAY) ③: ADU paper resist rate adjustment (ADU) Reference values: 40, 45, 50 (Enter "0" to display the reference value.) MUL1 TRAY : TRAY : ADU :	[7]-2-(2)
	05	◦ Frame delete rate adjustment (copy moving direction only) Used to set the frame delete rate. • When the test command is executed, the READY lamp turns on, and the figure previously stored is displayed on the copy number window. Now, it becomes ready to accept a number between 1 and 19 on the keypad. When the PRINT switch is pressed after the entry, the number is stored in the memory and the READY lamp turns off. A single rate deletes the frame of about 1.0mm. The standard value has been set to "6."	[7]-2-(2)
52	01	◦ ADU alignment plate adjust value setup Used to adjust the home position of the ADU alignment plate. When the test command is executed, the READY lamp turns on. Enter a new value as the previously set value came displayed, and press the PRINT switch to stored it in the memory. It can be adjustable from 1 to 99. The default is 7. Setting a smaller value increases the width of the alignment plate and vice versa.	
	02	◦ ADU rear plate adjust value setup Used to adjust the home position of the ADU rear plate. When the test command is executed, the READY lamp turns on. Enter a new value as the previously set value came displayed, and press the PRINT switch to stored it in the memory. It can be adjustable from 0 to 99. The default is 0. Setting a smaller value increases the width of the rear plate and vice versa.	
	03	ADU drive clutch off time setup Can be set to any number between 0 and 99 (Standard: 18). 1 = 6ms, 4 = 30ms, 10 = 90ms Setting a smaller value shortens the ADU clutch off timings and decreases the enforced curling rate of paper.	
53	01	◦ RADF and ADF stop position adjustment value (normal paper, single copy) setting Used to adjust the RADF stop position in single copy with normal paper. When this simulation is executed, the ready lamp lights up and the currently set adjustment value is displayed. Enter the new adjustment value and press the PRINT switch to store it in the memory. The adjustment value should be in the range of 0 to 15.	
	02	◦ RADF stop position adjustment value (normal paper, duplex copy) setting Used to adjust the RADF stop position in duplex copy with normal paper. When this simulation is executed, the ready lamp lights up and the currently set adjustment value is displayed. Enter the new adjustment value and press the PRINT switch to store it in the memory. The adjustment value should be in the range of 0 to 15.	
	03	◦ RADF and ADF stop position adjustment value (thin paper, single copy) setting Used to adjust the RADF stop position in single copy with thin paper. When this simulation is executed, the ready lamp lights up and the currently set adjustment value is displayed. Enter the new adjustment value and press the PRINT switch to store it in the memory. The adjustment value should be in the range of 0 to 15.	
	04	◦ RADF and ADF stop position adjustment value (thin paper, duplex copy) setting Used to adjust the RADF stop position in duplex copy with thin paper. When this simulation is executed, the ready lamp lights up and the currently set adjustment value is displayed. Enter the new adjustment value and press the PRINT switch to store it in the memory. The adjustment value should be in the range of 0 to 15.	
	05	◦ RADF and ADF resist sensor adjustment Used to adjust the RADF resist sensor. (In the case of ADF, the resist sensor and the paper pass width sensor are adjusted.) When this simulation is executed, the RADF resist sensor is adjusted and the adjustment value is displayed.	

Main code	Sub code	Description	Ref. Page
53	06	◦ RADF and ADF timing sensor adjustment Used to adjust the RADF timing sensor. When this simulation is executed, the RADF timing sensor is adjusted and the adjustment value is displayed.	
	07	◦ RADF and ADF repulsion sensor adjustment Used to adjust the RADF repulsion sensor. When this simulation is executed, the RADF repulsion sensor is adjusted and the adjustment value is displayed.	
	08	◦ RADF and ADF empty sensor adjustment Used to adjust the RADF empty sensor. When this simulation is executed, the RADF empty sensor is adjusted and the adjustment value is displayed.	

(Trouble codes list)

Trouble status code	Subordinate code	Description
L4	01	Main motor lock detection
L5	03	No.4/5 mirror motor error detection
	04	No.4/5 mirror motor MHPS error detection
	05	Lens motor error detection
	06	Lens motor LHPS error detection
L8	01	Power supply line frequency error detection
H2	—	Open thermistor (Test command 14 to reset)
H3	—	Heat roller high temperature detection (Test command 14 to reset)
H4	—	Heat roller low temperature detection (Test command 14 to reset)
U2	00 01	Memory. Counter sumcheck error detection (Test command 16 to reset)
U3	20	Mirror motor lock detection
	21	Mirror motor MHPS error detection
U4	02	ADU alignment plate malfunction detected
	04	ADU rear plate malfunction detected
U5	00	ADF communication trouble detected
	01	A motor malfunction detected
	02	B motor malfunction detected
	03	Resist sensor malfunction detected
	04	Eject sensor malfunction detected
U6	00	Desk communication trouble detected
	01	Desk-1 cassette liftup motor trouble detected
	02	Desk-2 cassette liftup motor trouble detected
	03	Desk-3 cassette liftup motor trouble detected
	08	Desk 24V line error detected
	09	LCC motor overcurrent detected
	10	Desk transport motor trouble detected
U7	00	Communication trouble between PC/Modem and the copier.
F1	00	Sorter communication trouble detected
	01	Paper jog malfunction detected
	02	Transport motor malfunction detected
	04	Indexer lower limit detected
	05	Indexer upper limit detected
	06	Shift motor malfunction detected
F2	02	Toner motor malfunction detected
	31	ID sensor level abnormality (less than 3V) ID sensor photo conductor surface level abnormality (less than 2.25V)
	32	DM sensor level abnormality (less than 3V) DM sensor cannot sense. When measuring the gain level (at 1.5 rotations of the drum) DM sensor cannot sense. When measuring the patch (at 1.5 rotations of the drum)
	35*	Adjustment impossible for GB (-32V * 4 times) Adjustment impossible for GB (+32V *7 times) Preliminary adjustment impossible for GB (-200V to -88V)
F3	12	Main unit upper cassette liftup motor trouble detected
	22	Main unit bottom cassette liftup motor trouble detected
EE	EL	Toner sensor indicates extreme overtoned condition
	EU	Toner sensor indicates extreme undertoned condition
CC	—	Original size detect sensor level abnormality.
C2	00	THV leak trouble

Mark " * ": The error display is given only when performing the simulation. (For the process control at warming-up,, the error display is not given.)

Display codes other than trouble

Trouble codes	Sub code	Operation
CH	—	Door open/DV unit uninstalled
PC	—	Personal counter uninstalled/auditor code input waiting
PF	—	Copy inhibit command is received from the host when installing PC/Modem.

(Key operator program)

The list below shows all key operator programs. These programs can be used only when the key operator code in inputted at the beginning.

Program Code No.	Program name	Function
P10	Auditing Mode	Enables or disables the basic auditing mode, which controls access to copier.
P11	Number of Copies per Account	Displays the total number of copies made against account numbers.
P13	Resetting Account	Resets all audit accounts or selectively resets individual accounts.
P14	Account Number Control	Registers accounts, deletes accounts, changes an account number, or displays all registered account numbers.
P16	Account Limit Setting	Sets the maximum number of copies which can be made against a registered account number.
P18	Account Number Security	Guards against trial and error entering of audit account numbers.
P19	Key Operator Code Number Change	Changes the key operator code number.
P20	Auto Exposure Adjust	Lightens or darkens copies in the automatic exposure mode.
P21	Auto Power Shut-off Timer	Sets a time interval after which the copier automatically turns off.
P22	Toner Save Mode	Reduces toner consumption.
P23	Auto Clear Setting	Sets a time interval after which the copier returns to the initial settings.
P24	Add or Change Extra Preset Ratios	Adds or changes reduction and enlargement preset copy ratios.
P25	Setting a Maximum Number of Copies	Sets the maximum number of copies that can be selected.
P26	Initial Margin Shift Setting	Sets the initial margin shift values.
P27	Erase Width Adjustment	Sets the amount of the erase area.
P28	Initial Status Setting	Sets the copier's initial settings in the ready condition.
P29	Total Copy Count	Recalls the total copy counts of the copier, document feeder, duplex module, and stapler.
P31	Preheat Mode Setting	Sets the time that elapses before the copier enters the preheat mode after copying is completed.
P42	Right/Left Shift Direction Selection	Determines whether shift direction change is to be allowed.
P45	Message Time Setting	Sets the length of time that messages are displayed.
P46	Power On Control	Prevents the copier from being started by people other than key operator.
P47	Stream Feeding Mode	Enables the stream feeding mode for copying from an optional document feeder.
P51	Sorter Bin Access Mode	Enables or disables the sorter bin access mode when an optional 10-bin sorter (SF-S18) is installed.
P70	Disabling of Auto Paper Selection	Prevents automatic paper selection when using the ORIGINAL SIZE ENTER key or copying from an optional document feeder.
P71	Disabling of Auto Tray Switching	Prevents automatic switching between the paper trays.
P72	Prohibiting of Manual Feed Tray in Duplex Copy	Prohibits the use of the manual feed tray during duplex copying. (Duplex copying can be performed when an optional duplex module is installed.)
P73	Disabling Deletion of Job Programs	Prevents stored programs from being replaced or deleted.
P74	Disabling of Document Feeder	Prevents the use of an optional document feeder when it malfunctions.
P75	Disabling of Duplex Copying	Temporarily prevents the optional duplex system from operating when it malfunctions. Allows the use of the copier but not the duplex system.
P76	Disabling of Stapler	Prevents damage to the stapler while awaiting repair service. (Staple sorters are optional.)
P77	Disabling of Covers	Prevents the selection of COVERS mode. (The COVERS mode can be used when an optional document feeder is installed.)
P83	Disabling of PC/Modem Access	Provides or prevents access to key operator programs through a PC/modem without key operator code entry. (Remote access to key operator programs can be performed only when a computer or other equipment is connected to the copier directly or through a telephone line.)
P90	Display the List of All P Codes	Sequentially displays all available programs.

[9] MAINTENANCE AND OTHERS

The maintenance of the SF-2030 should be performed every 80K and 120K cycles.
<Remarks>
★= lubrication, ○=cleaning, ≠adjustment, ▲=replacement/mounting, □=repositioning,
×=check (cleaning, replacement and/or adjustment if necessary)

Unit name	Part name	40K	80K	120K	160K	200K	240K	280K	320K	Note
Process UN	Drum		▲		▲		▲		▲	
	Cleaner blade		▲		▲		▲		▲	
	Toner reception seal		▲		▲		▲		▲	
	Cleaner seal		▲		▲		▲		▲	
	Charging plate UN (saw teeth)		▲		▲		▲		▲	
	Screen grid		▲		▲		▲		▲	
	MC case		○		○		○		○	
	Drum separation pawl		▲		▲		▲		▲	
	B.L.		○		○		○		○	
	D.L.		○		○		○		○	
	Density sensor		○		○		○		○	
	Drum mark sensor		○		○		○		○	
	TC wire		▲		▲		▲		▲	
	TC case		○		○		○		○	
Developing UN	Developer	▲	▲	▲	▲	▲	▲	▲	▲	
	DV seal		▲		▲		▲		▲	
	DSD color		○		○		○		○	
	DV side seal		×		▲		×		▲	
Fusing UN	Upper heat roller		▲		▲		▲		▲	
	Lower heat roller		▲		▲		▲		▲	
	Upper/lower cleaning rollers		▲		▲		▲		▲	
	Upper separation pawl		▲		▲		▲		▲	
	Lower separation pawl		▲		▲		▲		▲	
	Thermistor		○		○		○		○	
	Heat roller gear		▲		▲		▲		▲	
	Gears		★		★		★		★	
Optical UN	Mirror lens / Reflector / Sensors		○		○		○		○	
	Table glass / Dust-proof glass		○		○		○		○	
	Rails		★		★		★		★	
Ozone filters / filters			▲		▲		▲		▲	
Paper feed section	∗ Paper feed roller		×		×		×		×	∗2
D20, D21	∗ Reverse roller		×		×		×		×	∗2
	∗ Take-up roller		×		×		×		×	∗2
	∗ Torque limiter		×		×		×		×	
	Brake SP		★		★		★		★	
Suction	Suction belt		○		○		○		○	
Transport section	PS roller		○		○		○		○	
	Transport rollers		○		○		○		○	
	Paper guides		○		○		○		○	
Drive	Gears		★		★		★		★	
Picture quality			△		△		△		△	
ADU (DM11)	∗ Paper feed roller	×	×	×	×	×	×	×	×	∗3
	∗ Reverse feed roller	×	×	×	×	×	×	×	×	∗3
	∗ Take-up roller	×	×	×	×	×	×	×	×	∗3
	∗ Torque limiter		★		★		★		★	
	Transport rollers		○		○		○		○	
	Paper guides		○		○		○		○	

∗: Perform maintenance when the corresponding counter reaches the specified level.
∗2: Replace every 80K or 2 years. (For the manual paper feed section, replace every 40K or 2 years).
∗3: Replace every 40K or 2 years.

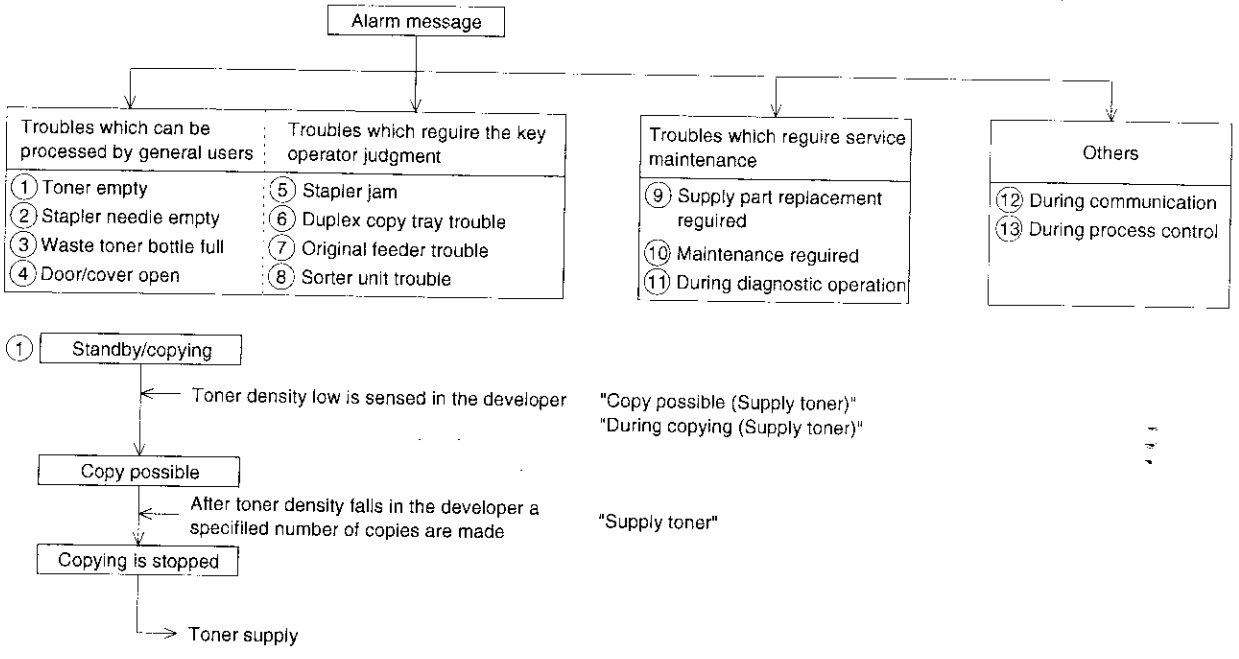
2. Counters and test commands related to maintenance

(1) List of counters and test commands related to maintenance

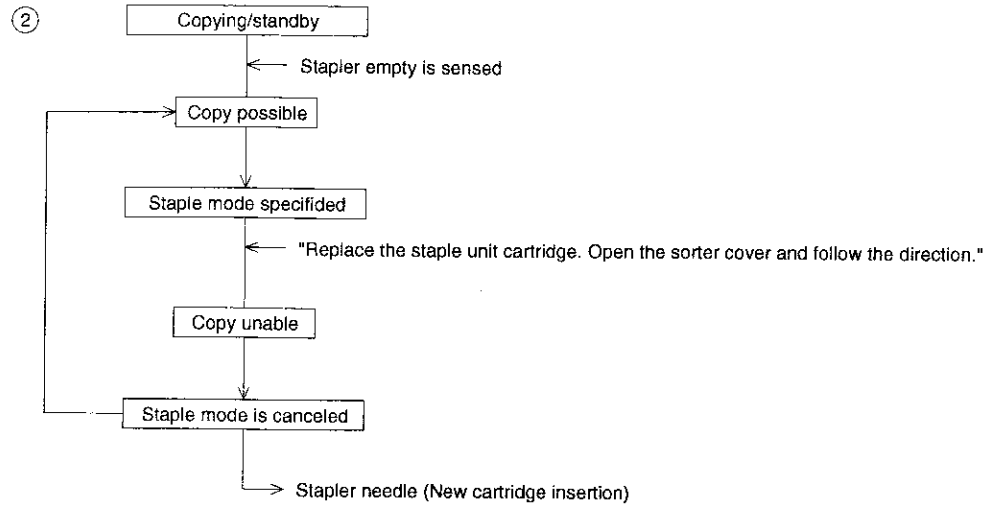
Function	Test Command		Description
	Main code	Sub code	
Clear the maintenance counter	20	*	The contents of the counter is cleared to zero.
Set the maintenance cycle	21	01	Code Maintenance cycle 0 ..... 80,000 sheets 1 ..... 5,000 2 ..... 10,000 3 ..... 20,000 4 ..... 40,000 sheets 5 ..... free
Maintenance counter display	22	01	○ Maintenance counter display Copy number of the maintenance counter is displayed.
Maintenance preset counter display		02	○ Maintenance preset counter display This test command is used to check the contents of the maintenance preset cycle counter.
Jam memory display		03	○ JAM memory display (JAM map display) Displays the causes (positions) of JAM occurred in copy operation. (Max. 50 JAMs from the recent one) To check the history of JAM cause
Total jam counter display		04	○ Total misfeed counter display
Total counter display		05	○ Total counter display This counter is used to show the total copy number of the machine.
Developer counter display		06	○ Developer counter display The contents of the copy number counter of the installed developing unit is displayed.
Developer preset cycle counter display		07	○ Developer preset cycle counter display Number of developer replacements and the reset counter contents of the installed developing unit are displayed.
RADF counter display		08	○ RADF counter display Used to check the number of originals fed through the RADF.
ADU counter display		09	○ Duplex counter display Used to check the number of sheets fed through the duplex unit.
Staple counter display		10	○ Staple counter display Used to check the number of uses of the staple unit.
Developer adjustment time display		11	○ Developer adjustment time display Used to check the correction level according to the developer rotating time.
Drum adjustment time display		12	○ Drum adjustment time display Used to check the correction level according to the drum rotating time.
Key operator code display		13	○ Key operator code display Used to check the key operator code registered voluntarily by the key operator.
ROM version display		14	○ ROM version display Used to display the version of ROM which is currently installed.
Trouble memory display		15	○ Trouble memory display Used to display the number of troubles occurred and the trouble codes up to 50 cases from the latest one.
Cassette paper feed counter display		16	○ Cassette paper feed counter display Used to check the counter value of each cassette.
Jam memory/total jam counter clear	24	01	○ Misfeed map memory and total misfeed counter clear
Duplex counter clear		03	○ RADF counter clear The contents of the copy number counter is reset for the RADF. It is mandatory to clear the memory contents after the maintenance is completed.
ADF/RADF counter clear		04	○ Duplex counter clear The contents of the copy number counter is reset to the duplex unit. It is mandatory to clear the memory contents after the maintenance is completed.
Staple counter clear		05	○ Staple counter clear The staple unit using counter is cleared to zero.
Developer adjustment time clear		06	○ Developer adjustment time clear The developer adjustment time is cleared to zero.
Drum adjustment time clear		07	○ Drum adjustment time clear The drum adjustment time is cleared to zero.
Cassette paper feed counter clear		08	○ Tray paper feed counter clear Used to clear the tray paper feed counter.
Clear the developer count	42	*	○ The contents of the developer counter are cleared to zero.

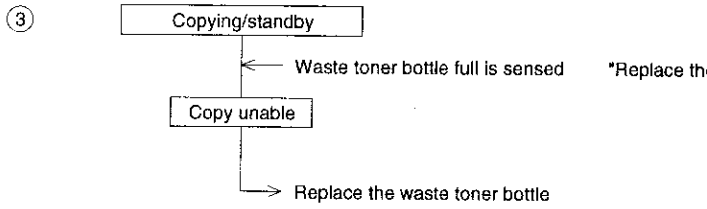
(2) Alarm message

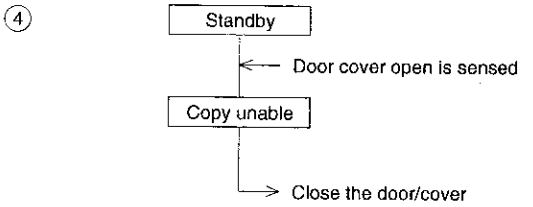
When any trouble occurs which makes it unable to start or continue copying, one of the following messages is displayed. When the trouble is cancelled, the message is cleared and the machine is automatically reset.


Alarm message
Troubles which can be processed by general users
Troubles which reguire the key operator judgment
(1) Toner empty
(2) Stapler needle empty
(3) Waste toner bottle full
(4) Door/cover open
(5) Stapler jam
(6) Duplex copy tray trouble
(7) Original feeder trouble
(8) Sorter unit trouble
Troubles which reguire service maintenance
(9) Supply part replacement reguired
(10) Maintenance reguired
(11) During diagnostic operation
Others
(12) During communication
(13) During process control

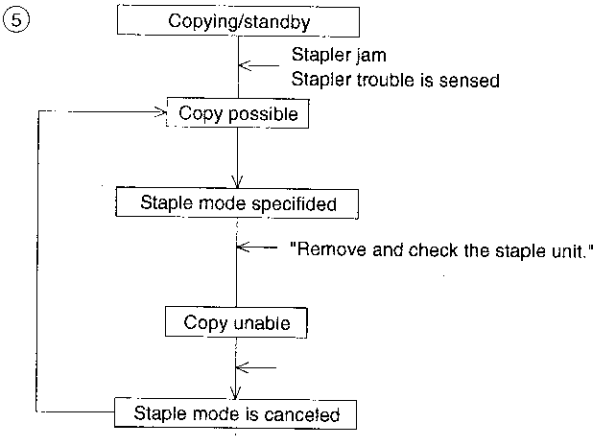
(1) Standby/copying
Toner density low is sensed in the developer
"Copy possible (Supply toner)"
"During copying (Supply toner)"
Copy possible
After toner density falls in the developer a specifiled number of copies are made
"Supply toner"
Copying is stopped
Toner supply



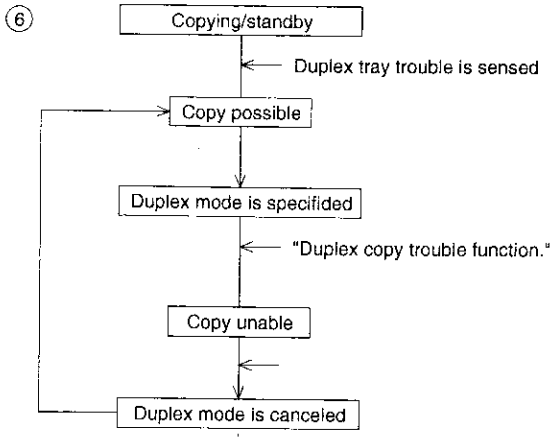




- When the door is open.
  "Close the front cover of the body."
- When the left door of the body is open
  "Close the left cover of the body."
- When the right door is open.
  "Close the right cover of the body."
- When the right door of the desk unit (option) is open.
  "Close the right cover of the paper feed unit."
- When the sorter cover is open.
  "Close the sorter cover."
- When the sorter is in abnormal state or the right cover is open
  "Check the sorter installation/cover open."



With removal of staple unit jam/key operator program No.76 the staple function is inhibited
Cancel: By opening/closing the staple unit cover
When the staple unit cover is open or closed without removing the trouble
the message may be displayed again in the staple mode



Use key operator program No.75 to inhibit automatic duplex copy
Cancel: If the power is turned on/off without canceling the error the machine goes into the ready mode but the message is displayed again when the duplex mode is selected

⑦, ⑧ Use of the function or the unit is inhibited
⑦ Original feeder No.74
⑧ Stsple function No.76

⑨, ⑩, ⑪ Service maintenance is performed

⑫
- The remote diagnosis function is operated. If copying is disabled during communication between the machine and the host computer the following message is displayed. (In normal cases copying takes priorty)
  "Wait for a while. Data is being transmitted to service."

⑬
- During measurement of process control sensor
  Copying is disabie during feedback process control and the following message is displayed
  "Wait for a while. Pictur quality is adjusted."

(3) Setting the copy counter mode

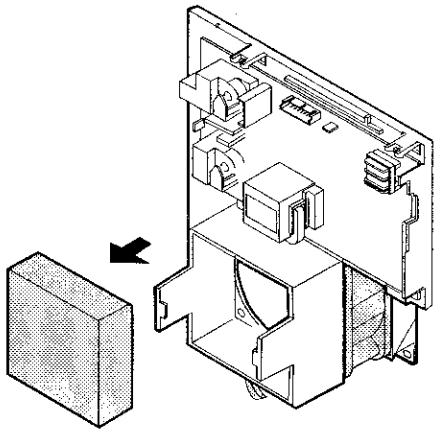
Simulation		Setting code	Auto-clear available	Maintenance counter	Total counter
Main	Sub				
26	05	0	○	double count	double count
		1	○	single count	double count
		2	○	double count	single count
		3	○	single count	single count

*1 The double/single count is limited to apply to A3-size paper.
*2 Code other than those given in the above table is invalid or may cause operation error.

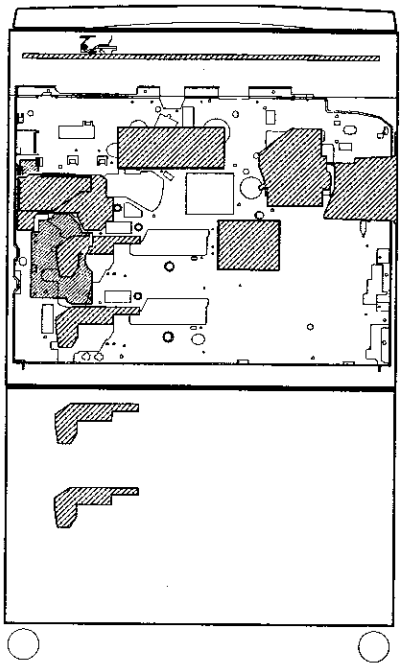
3. Replacing the Ozone Filter

The purpose of the ozone filter is to suppress emitting ozone from the machine, which is generated during corona discharge in the charger units. In order to maintain this effect, the ozone filter requires to be replaced every 80,000 sheets of copy paper.

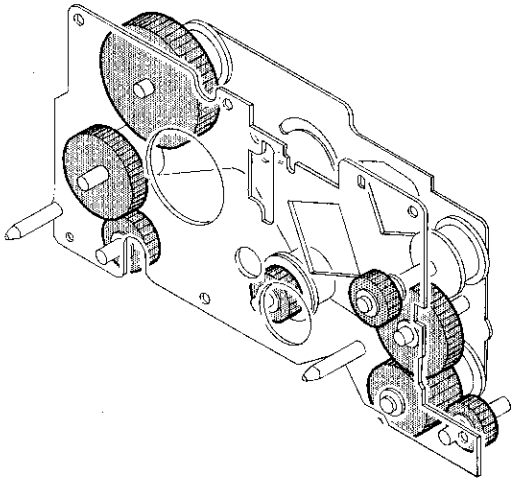
(1) Replacing the suction ozone filter



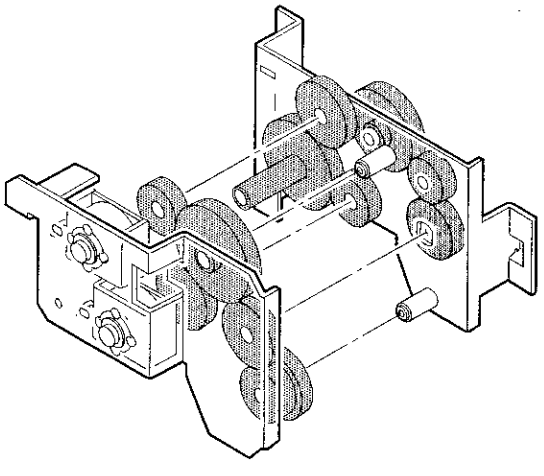
4. Oil/Grease Points



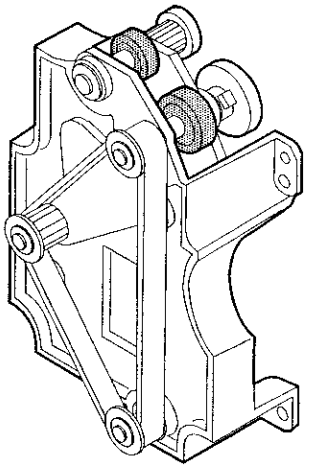
(1) Gear of main driving unit



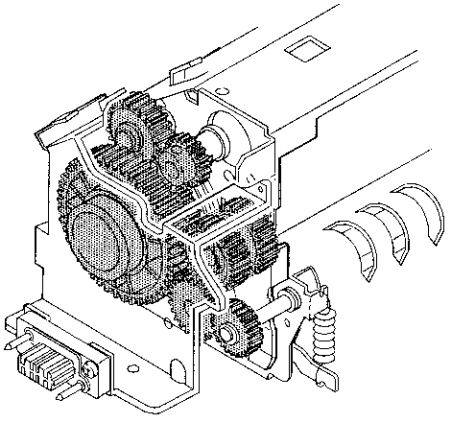
(2) Gears of variable-speed paper-feed unit



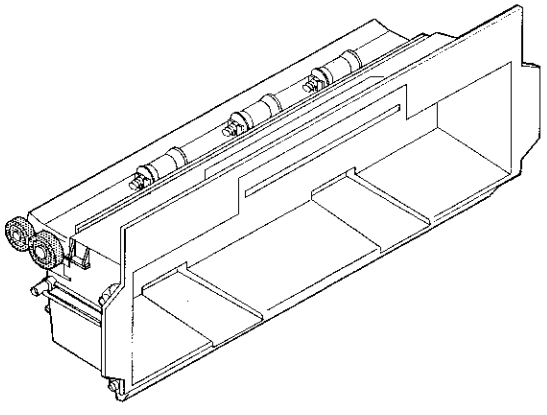
(3) Gears of paper-feed driving unit



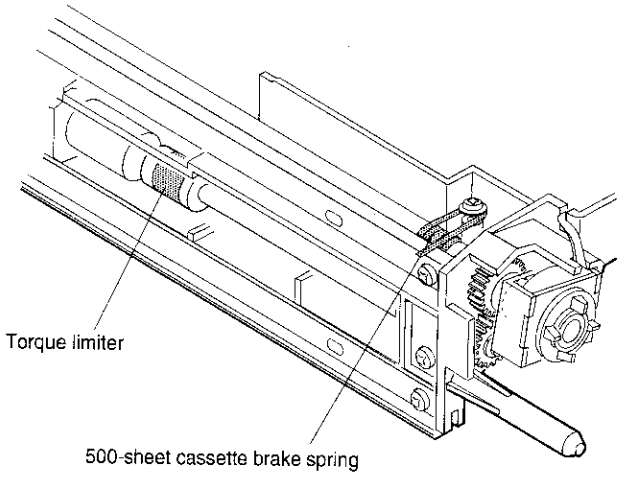
(4) Fusing unit driving gears



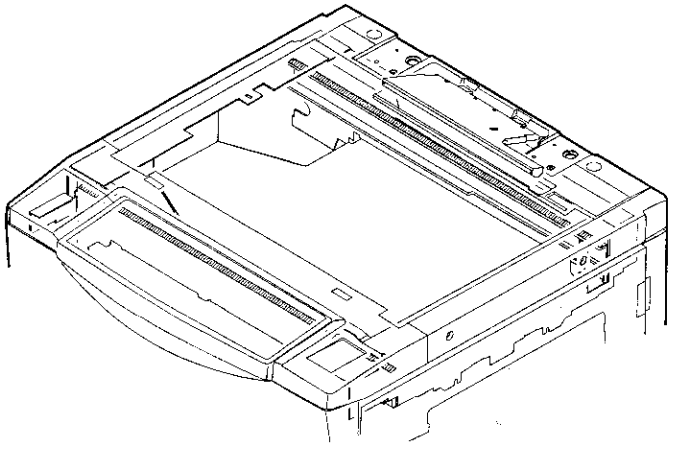
(5) Paper exit roller driving gears



(6) Paper-feed torque limiter
500-sheet cassette brake spring



(7) Optical rail



Note 1: Grease (Molycoat(UKOG-0062FCZZ) or White Molycoat (UKOG-0158FCZZ)) must be applied to the correct grease points of each gear. Do not use too much grease.

Note 2: No grease shall be applied inside the gear of the magnetic clutch.

5. Maintenance Schedule of Options

Maintenance of options must be done during that of the machine.
Maintenance of SF-D
20/D21/SF-DM11 is as follows:

- Duplex unit: Perform Simulation 22-9 to read out data in the duplex counter, and conduct maintenance on the basis of the data.
- Desk: every 80,000 sheets of copy paper.

Maintenance of RADF/ADF is as follows:
Perform Simulation 22-08 to check the contents of the RADF/ADF copy counter, and then conduct maintenance every 80,000 sheets of copy paper.
★ = lubrication ○ = cleaning △= adjustment ▲ = replacing/mounting × = check(cleaning, replacing and/or adjustment, if necessary), □= repositioning